United States Department of Agriculture

NRCS

Natural Resources Conservation Service

In cooperation with Illinois Agricultural Experiment Station

Soil Survey of White County, Illinois

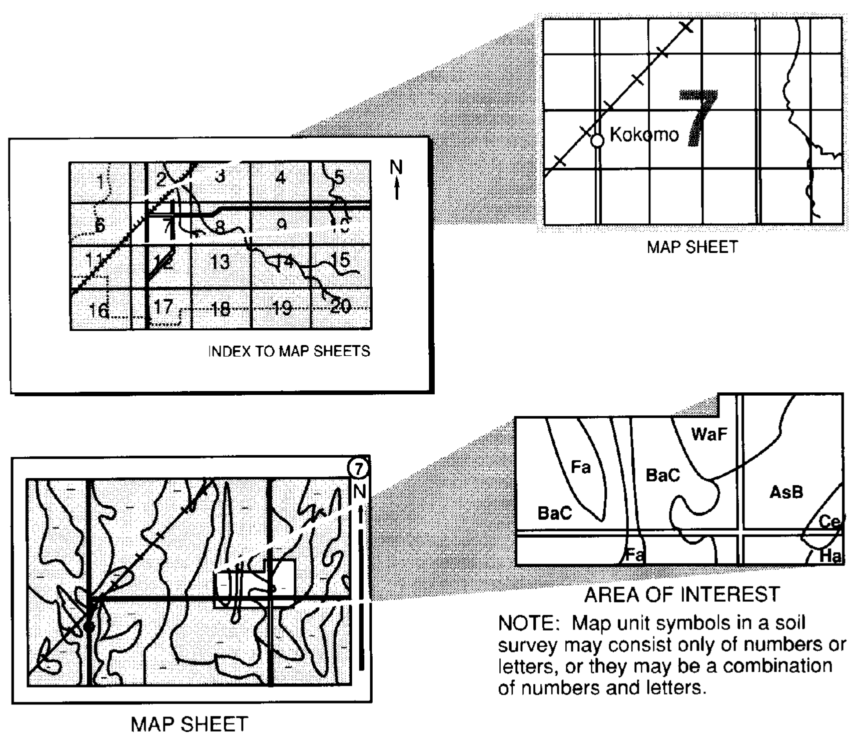
How To Use This Soil Survey

This publication consists of a manuscript and a set of soil maps. The information provided can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**. Note the number of the map sheet and turn to that sheet.

Locate your area of interest on the map sheet. Note the map unit symbols that are in that area. Turn to the **Contents**, which lists the map units by symbol and name and shows the page where each map unit is described.

The **Contents** shows which table has data on a specific land use for each detailed soil map unit. Also see the **Contents** for sections of this publication that may address your specific needs.



National Cooperative Soil Survey

This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (formerly the Soil Conservation Service) has leadership for the Federal part of the National Cooperative Soil Survey. This survey was made cooperatively by the Natural Resources Conservation Service and the Illinois Agricultural Experiment Station. It is part of the technical assistance furnished to the White County Soil and Water Conservation District. Financial assistance was provided by the White County Board and the Illinois Department of Agriculture.

Soil names and descriptions for this survey were approved in 2005. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 2005. The tables reflect the data in effect as of June 2010. The most current official data are available on the Internet (http://soils.usda.gov).

Soil maps in this survey may be copied without permission. Enlargement of these maps, however, could cause misunderstanding of the detail of mapping. If enlarged, maps do not show the small areas of contrasting soils that could have been shown at a larger scale.

Nondiscrimination Statement

Additional information about the Nation's natural resources is available online from the Natural Resources Conservation Service at http://www.nrcs.usda.gov.

Contents

Issued 2010

Foreword

Soil surveys contain information that affects land use planning in survey areas. They include predictions of soil behavior for selected land uses. The surveys highlight soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

Soil surveys are designed for many different users. Farmers, foresters, and agronomists can use the surveys to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the surveys to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the surveys to help them understand, protect, and enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. The information in this report is intended to identify soil properties that are used in making various land use or land treatment decisions. Statements made in this report are intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://soils.usda.gov/sqi/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://soils.usda.gov/contact/state_offices/).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. The location of each map unit is shown on the detailed soil maps. Each soil in the survey area is described, and information on specific uses is given. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

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Soil Survey of
White County, Illinois

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Previous soil survey by W. Scott Martin, Natural Resources Conservation Service; fieldwork by Bruce J. Houghtby and W. Scott Martin, Natural Resources Conservation Service, and Carol Latowski and Robert Rhynas, White County

Classification and correlation of the soils by Gary R. Struben, John C. Doll, Dwayne R. Williams, Samuel J. Indorante, Jon D. Bathgate, W. Matt McCauley, and Bryan C. Fitch, Natural Resources Conservation Service

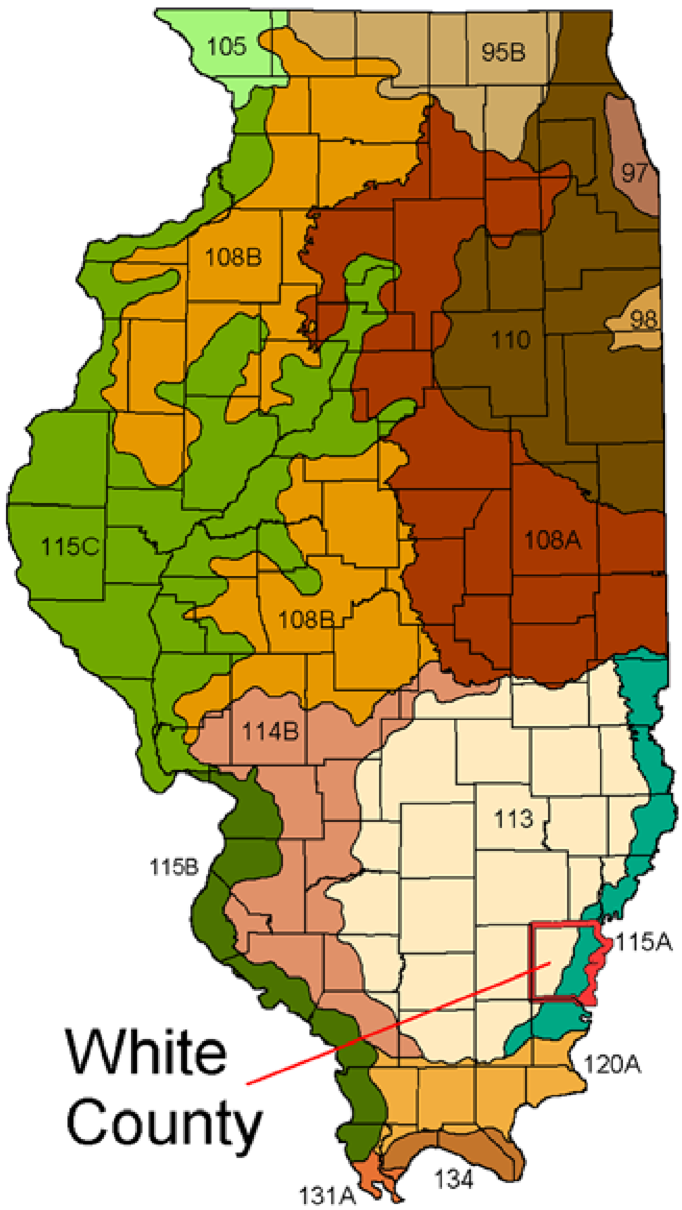
United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with the White County Soil and Water Conservation District and the Illinois Agricultural Experiment Station

White County is in southeastern Illinois (fig. 1). It is in Major Land Resource Areas (MLRAs) 113, Central Claypan Areas, and 115A, Central Mississippi Valley Wooded Slopes, Eastern Part (USDA/NRCS, 2006).

The survey area is bounded on the west by Hamilton County, on the north by Wayne and Edwards Counties, on the east by the Wabash River, and on the south by Gallatin County. White County consists of small towns, forests, barrens, wetlands, pasture, and cropland. The county has a total area of 502 square miles (1,299 km^2), of which 495 square miles (1,282 km^2) is land and 7 square miles (18 km^2) (1.36 percent) is water (U.S. Department of Commerce, 2002).

White County is served by one Interstate highway, one U.S. highway, two State highways, and a number of hard-surfaced county roads. In 2002, there were approximately 482 farms in White County (USDA, National Agricultural Statistics Service, 2002). The average farm size was 583 acres. Most farm owners or operators supplement their income by working off the farm. Along with agriculture, a number of small businesses and industries provide employment in the county. The top four crop commodities, by acres, are soybeans, corn, wheat, and hay (USDA, National Agricultural Statistics Service, 2002). The top three livestock commodities, by number, are hogs, cattle, and poultry (USDA, National Agricultural Statistics Service, 2002). The county has approximately 51,000 acres of forestland (Schmidt and others, 2000).

This survey updates the survey of White County published in 1996 (Martin and others, 1996). It provides more descriptive and interpretive information and has larger maps, which show the soils in greater detail. Some of the information from the earlier survey has been incorporated in this publication with little or no alteration.



LEGEND
95B—Southern Wisconsin and Northern Illinois Drift Plain
97—Southwestern Michigan Fruit and Truck Crop Belt
98—Southern Michigan and Northern Indiana Drift Plain
105—Northern Mississippi Valley Loess Hills
108A and 108B—Illinois and Iowa Deep Loess and Drift
110—Northern Illinois and Indiana Heavy Till Plain
113—Central Claypan Areas
114B—Southern Illinois and Indiana Thin Loess and Till Plain, Western Part
115A, 115B, and 115C—Central Mississippi Valley Wooded Slopes
120A—Kentucky and Indiana Sandstone and Shale Hills and Valleys, Southern Part
131A—Southern Mississippi River Alluvium
134—Southern Mississippi Valley Loess

Figure 1.—Location of White County and the major land resource areas (MLRAs) in Illinois.

General Nature of the County

This section provides general information about the survey area. It describes history and development; ecology, physiography, relief, and drainage; and climate.

History and Development

The first European settlers arrived in the area between 1807 and 1809. The first settlements were near the Little Wabash River and Big Prairie, one of the numerous prairies in the county. These settlers typically came from the Carolinas, Kentucky, or Tennessee and were of Scotch-Irish descent. Many came through the land office at Shawneetown, which was a port for flatboats traveling the Ohio River. The city of Carmi was founded in 1814 and incorporated in 1816.

White County was organized from Gallatin County in 1815. The county was named after Captain Leonard White, a Gallatin County legislator who is credited with the idea of extending the Illinois-Wisconsin border a few miles north of the southern tip of Lake Michigan. The first courthouse in White County was in the cabin of John Craw.

Other early settlements included Grayville, located at the mouth of Bonpas Creek and the (Big) Wabash River, which was settled by the Gray family in about 1810, and New Haven (mostly in Gallatin County), which was home to a brother of Daniel Boone around 1818. Old Sharon Church (Presbyterian), near the later village of Sacramento, was organized in about 1819, and the village of Seven Mile Prairie was established a few miles north of the church in the 1830s.

The second half of the 19th century saw the establishment of the towns of Norris City, Springerton, Mill Shoals (once the home of a thriving barrel-making industry, which depleted the nearby virgin forests), Epworth, Herald, Burnt Prairie, Crossville, Phillipstown, Concord (also known as Emma), Maunie, and Rising Sun (commonly called Dogtown). The latter two villages are located along the Wabash River and attracted several African-American families.

Agriculture was the primary industry of White County until the summer of 1939, when oil was discovered in the Storms and Stinson fields in the bottom land along the Wabash River. The population of Carmi doubled within 2 years, from 2,700 to 5,400. The population of Crossville and Grayville also increased. In 1940, it was said, one could walk between these two towns by simply walking from rig to rig. Many of the oil workers migrated from previous oil booms in Texas and Oklahoma.

The current population of White County is a little over 17,000; the population of Carmi, which is the county seat, is about 6,500. Many of the county's residents work in factories in Evansville or Mt. Vernon, Indiana. Besides oil and agriculture, industries in the survey area include auto parts manufacturing, plastics, a convenience store distribution center, and underground coal mining (White County, Illinois, Web site).

Ecology, Physiography, Relief, and Drainage

In accordance with the USDA Forest Service national hierarchical framework of ecological units, White County includes three ecological units. The western part of the county is in the Mount Vernon Hill Country subsection of the Central Till Plains Oak-Hickory section of the Eastern Broadleaf Forest (Continental) Province. The area near the Little Wabash and Wabash Rivers is in the Lower Wabash Alluvial Plain subsection of the Central Till Plains Oak-Hickory section of the Eastern Broadleaf Forest (Continental) Province. The rest of the county is in the Wabash Uplands subsection of the Central Till Plains Oak-Hickory section of the Eastern Broadleaf Forest (Continental) Province (USDA, Forest Service, 1995).

The topography of White County consists of upland plains, terraces, lake plains, and flood plains. This landscape is the result of the action of continental glaciers in the recent geologic past and the preglacial bedrock surface. Most of the gently rolling

uplands are bedrock controlled and have a mantle of Illinoian till and loess. Terraces formed when the deposition of Wisconsin-aged outwash dammed river valleys, which became lakes. These lakes were filled with sediments and became lake plains. The uplands are in all areas of the county, except for the southeastern part between the Little Wabash and Wabash Rivers. Most of the terraces are in this area. The lake plains surround the terraces, and the flood plains are adjacent to the rivers and streams. The widest flood plains are along the Wabash River.

The highest point in the county, about 580 feet above sea level, is Boyd Hill (fig. 2). It is about 1 mile west of Centerville. The lowest point, about 340 feet, is in the area where the Little Wabash River enters the Wabash River.

Surface water drains into the basin of the Wabash River in all areas of the county, except for the southwestern part. Bear Creek and Indian Creek drain into the Saline River, which is in the basin of the Ohio River (Martin and others, 1996).

Climate

Table 1 gives data on temperature and precipitation for the survey area as recorded at Albion, Illinois (in Edwards County) during the period from 1971 to 2000. Table 2 shows probable dates of the first freeze in fall and the last freeze in spring. Table 3 provides data on the length of the growing season.

In winter, the average temperature is 33.8 degrees F and the average daily minimum temperature is 25.3 degrees. In summer, the average temperature is 77.2 degrees and the average daily maximum temperature is 88.1 degrees.

Growing degree days are shown in table 1. They are equivalent to “heat units.” During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (50 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The average annual total precipitation is 44.25 inches. Of this total, 26.96 inches, or about 61 percent, usually falls in April through October. The growing season for most crops falls within this period.

The average seasonal snowfall is 10.9 inches. On an average, 10 days per year have at least 1 inch of snow on the ground. The number of such days varies greatly from year to year.

How This Survey Was Made

This survey was made to update and digitize the 1996 soil survey of White County (Martin and others, 1996). White County is a subset of Major Land Resource Areas (MLRAs) 113 and 115A (fig. 1). MLRAs are geographically associated land resource units that share a common land use, elevation, topography, climate, water, soils, and vegetation (USDA/NRCS, 2006). Map unit design is based on the occurrence of each soil throughout an MLRA. In some places in this publication, a soil may be referred to that does not occur in White County but that has been mapped within the MLRA.

The information in this survey includes a description of the soils and miscellaneous areas and their location and a discussion of their properties and the subsequent effects on suitability, limitations, and management for specified uses. During the 1996 soil survey and as part of this update, soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of soil parent materials. Soil scientists also studied and described soil profiles. A soil profile is a sequence of natural layers, or horizons, in the soil. The profile extends from the soil surface down into the unconsolidated material in which the soil formed. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity. Soil scientists prepared new soil profile descriptions and studied profile descriptions from previous fieldwork.

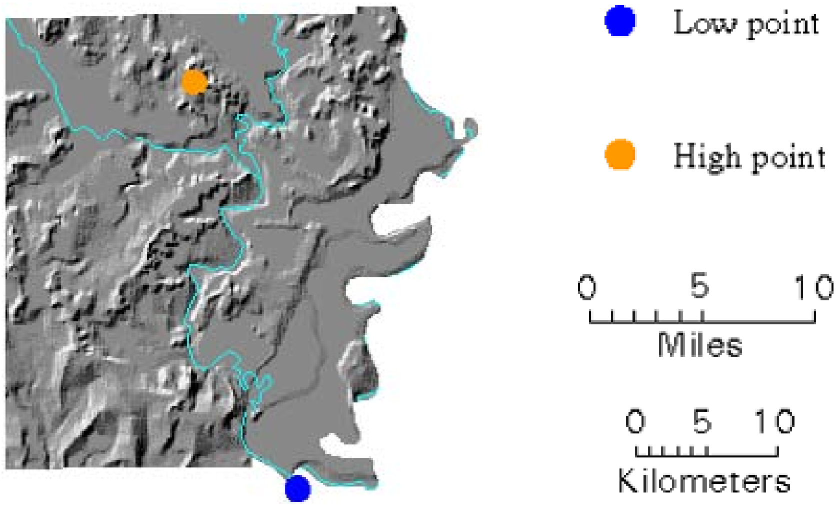


Figure 2.—A generalized relief map of White County showing the location of the highest and lowest points in the county. The orange dot represents the highest point, 580 feet above sea level, at Boyd Hill. The blue dot represents the lowest point, less than 340 feet above sea level, where the Little Wabash River enters the Wabash River.

The soils in the survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the county. Each kind of soil is associated with a particular kind or segment of the landscape. By observing the soils in the survey area and relating their position to specific segments of the landscape, soil scientists develop a concept, or model, of how the soils were formed. Thus, during mapping, this model enables the soil scientists to predict with a considerable degree of accuracy the kind of soil or soils at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they observed. The maximum depth of observation was about 80 inches (6.7 feet). Soil scientists noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, soil reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify and interpret soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the survey area generally are collected for laboratory analyses and for engineering tests. Field observations and measurements also are made for selected soils. Soil scientists

interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to estimate the expected behavior of the soils under different uses. Information from other soil surveys and soil studies also is used to develop soil interpretations.

Soils vary across the landscape and with time. Predictions about soil behavior are based not only on how soils occur on the landscape but also on such variables as climate, biological activity, and local land use. Some soil conditions are very stable and predictable over long periods of time. Examples are clay content in the subsoil and cation-exchange capacity. Some soil conditions change rapidly over the course of a year but are still predictable. Examples are monthly soil moisture status within certain depths in the soil profile and monthly depth and duration of ponding in a detailed soil map unit.

Interpretations for some of the soils are field tested through observation of the soils in different uses and under different levels of management. National and regional soil interpretations are modified as necessary to fit local conditions, and some new interpretations are developed to meet local needs. Map unit descriptions, interpretations, and tables for this soil survey were generated using the National Soil Survey Information System (NASIS), version 5.4.

Aerial photographs were taken in 1993. Soil scientists also used U.S. Geological Survey topographic maps (enlarged to a scale of 1:12,000) and orthophotographs to relate land and image features. Selected areas of the county were reinvestigated so that local soil-landscape models could be updated and refined. Soil boundaries from the soil maps published in 1996 were drawn on the orthophotographs. Adjustments of soil boundary lines were made to coincide with the U.S. Geological Survey topographic map contour lines, Digital Elevation Models (DEMs), and tonal patterns on aerial photographs.

The descriptions, names, and delineations of the soils in this survey area may not fully agree with those of the soils in adjacent survey areas. Differences are the result of an improved knowledge of soils, modifications in series concepts, or variations in the intensity of mapping or in the extent of the soils in the survey areas.

Detailed Soil Map Units

The map units delineated on the detailed soil maps in this survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. The contrasting components are mentioned in the map unit descriptions. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and lists properties and qualities that can affect planning for specific uses.

Soils that have profiles that are almost alike make up a *soil series*. All the soils of a series have major horizons that are similar in composition, thickness, and arrangement. The soils of a given series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name

of a soil phase commonly indicates a feature that affects use or management. For example, Bluford silt loam, 2 to 5 percent slopes, eroded, is a phase of the Bluford series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are called complexes. A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Sylvan-Hickory silt loams, 35 to 70 percent slopes, is an example.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Map unit 865, Pits, gravel, is an example.

Table 4 lists the map units in this survey area. Other tables give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils.

2A—Cisne silt loam, 0 to 2 percent slopes

Setting

Landform and landscape: Flats on uplands
Position on the landform: Summits

Map Unit Composition

Cisne and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a lighter colored surface layer
- Soils that are deeper to a claypan
- Soils that contain less clay

Dissimilar soils:
- The somewhat poorly drained Hoyleton soils in the slightly higher positions on the landform

Properties and Qualities of the Cisne Soil

Parent material: Peoria and Roxana Loess over drift
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: 15 to 23 inches to an abrupt textural change
Available water capacity: About 10.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: High
Depth and months of highest perched seasonal high water table: At the surface, January through June
Ponding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w

Prime farmland category: Prime farmland where drained
Hydric soil status: Hydric

3A—Hoyleton silt loam, 0 to 2 percent slopes

Setting

Landform and landscape: Till plains on uplands
Position on the landform: Summits

Map Unit Composition

Hoyleton and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a lighter colored surface layer
- Soils that are more sloping
- Soils that contain less clay
- Soils that are deeper to a claypan

Dissimilar soils:
- The moderately well drained Ava soils on side slopes and nose slopes of interfluves
- The poorly drained Cisne soils on flats

Properties and Qualities of the Hoyleton Soil

Parent material: Peoria and Roxana Loess over drift
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.5 to 3.5 percent
Shrink-swell potential: High
Depth and months of highest apparent seasonal high water table: 1 foot, January through May
Ponding: None
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

3B—Hoyleton silt loam, 2 to 5 percent slopes

Setting

Landform and landscape: Till plains on uplands
Position on the landform: Summits, shoulders

Map Unit Composition

Hoyleton and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a lighter colored surface layer
- Soils that are more sloping
- Soils that contain less clay
- Soils that are deeper to a claypan

Dissimilar soils:
- The moderately well drained Ava soils on side slopes and nose slopes of interfluves

Properties and Qualities of the Hoyleton Soil

Parent material: Peoria and Roxana Loess over drift
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.5 to 3.5 percent
Shrink-swell potential: High
Depth and months of highest apparent seasonal high water table: 1 foot, January through May
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

8D2—Hickory silt loam, 10 to 18 percent slopes, eroded

Setting

Landform and landscape: Till plains on uplands
Position on the landform: Shoulders, backslopes

Map Unit Composition

Hickory and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have slopes of more than 18 percent
- Severely eroded soils that have a surface layer of clay loam
- Small areas of soils that have outcrops of sandstone or shale

Dissimilar soils:
- The moderately well drained Ava soils in positions above those of the Hickory soil
- The somewhat poorly drained Belknap soils on flood plains

Properties and Qualities of the Hickory Soil

Parent material: Loamy till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.5 percent
Shrink-swell potential: Moderate
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

8F—Hickory silt loam, 18 to 35 percent slopes

Setting

Landform and landscape: Till plains on uplands
Position on the landform: Backslopes

Map Unit Composition

Hickory and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have slopes of more than 35 percent or less than 18 percent
- Severely eroded soils that have a surface layer of clay loam
- Small areas of soils that have outcrops of sandstone or shale

Dissimilar soils:
- The moderately well drained Ava soils on shoulders and the upper backslopes
- The somewhat poorly drained Belknap soils on flood plains

Properties and Qualities of the Hickory Soil

Parent material: Loamy till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: High

Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 6e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

12A—Wynoose silt loam, 0 to 2 percent slopes

Setting

Landform and landscape: Flats on uplands
Position on the landform: Summits

Map Unit Composition

Wynoose and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a darker surface layer
- Soils that have a thicker surface layer and subsurface layer
- Soils that contain less clay

Dissimilar soils:
- The somewhat poorly drained Bluford soils in the slightly higher positions on the landform

Properties and Qualities of the Wynoose Soil

Parent material: Peoria and Roxana Loess over drift
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: 13 to 23 inches to an abrupt textural change
Available water capacity: About 9.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: High
Depth and months of highest perched seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.2 foot
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Not prime farmland
Hydric soil status: Hydric

13A—Bluford silt loam, 0 to 2 percent slopes

Setting

Landform and landscape: Till plains on uplands
Position on the landform: Summits

Map Unit Composition

Bluford and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a darker surface layer
- Soils that are deeper to a claypan
- Soils that have less clay in the subsoil

Dissimilar soils:
- The moderately well drained Ava soils on side slopes and nose slopes of interfluves
- The poorly drained Wynoose soils on flats

Properties and Qualities of the Bluford Soil

Parent material: Peoria and Roxana Loess over drift
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: High
Depth and months of highest perched seasonal high water table: 0.5 foot, January through May
Ponding: None
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained
Hydric soil status: Not hydric

13B—Bluford silt loam, 2 to 5 percent slopes

Setting

Landform and landscape: Till plains on uplands
Position on the landform: Shoulders, summits

Map Unit Composition

Bluford and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a darker surface layer
- Soils that are deeper to a claypan
- Soils that have less clay in the subsoil

Dissimilar soils:
- The moderately well drained Ava soils on side slopes and nose slopes of interfluves

Properties and Qualities of the Bluford Soil

Parent material: Peoria and Roxana Loess over drift
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: High
Depth and months of highest perched seasonal high water table: 0.5 foot, January through May
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

13B2—Bluford silt loam, 2 to 5 percent slopes, eroded

Setting

Landform and landscape: Till plains on uplands
Position on the landform: Shoulders, backslopes

Map Unit Composition

Bluford and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a darker surface layer
- Severely eroded soils that have a surface layer of silty clay loam
- Soils that contain less clay in the subsoil

Dissimilar soils:
- The moderately well drained Ava soils on nose slopes and side slopes
- The somewhat poorly drained Belknap soils along drainageways

Properties and Qualities of the Bluford Soil

Parent material: Peoria and Roxana Loess over drift
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: High
Depth and months of highest perched seasonal high water table: 0.5 foot, January through May
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

14B—Ava silt loam, 2 to 5 percent slopes

Setting

Landform and landscape: Till plains on uplands
Position on the landform: Summits

Map Unit Composition

Ava and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that are redder and less brittle
- Soils that are moderately eroded
- Soils that are more sloping

Dissimilar soils:
- The somewhat poorly drained Bluford soils at the head of drainageways and on concave side slopes

Properties and Qualities of the Ava Soil

Parent material: Peoria and Roxana Loess over drift
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: 25 to 40 inches to a fragipan
Available water capacity: About 8.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate
Depth and months of highest perched seasonal high water table: 1.5 feet, January through April
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

14B2—Ava silt loam, 2 to 5 percent slopes, eroded

Setting

Landform and landscape: Till plains on uplands
Position on the landform: Summits, shoulders

Map Unit Composition

Ava and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that are redder and less brittle
- Severely eroded soils that have a surface layer of silty clay loam
- Soils that are more sloping

Dissimilar soils:
- The somewhat poorly drained Bluford soils at the head of drainageways and on concave side slopes

Properties and Qualities of the Ava Soil

Parent material: Peoria and Roxana Loess over drift
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature: 25 to 40 inches to a fragipan
Available water capacity: About 7.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Depth and months of highest perched seasonal high water table: 1.5 feet, January through April
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

14C2—Ava silt loam, 5 to 10 percent slopes, eroded

Setting

Landform and landscape: Till plains on uplands
Position on the landform: Backslopes, shoulders

Map Unit Composition

Ava and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that are redder and less brittle
- Severely eroded soils that have a surface layer of silty clay loam
- Soils that are more sloping

Dissimilar soils:
- The somewhat poorly drained Bluford soils at the head of drainageways and on concave side slopes

Properties and Qualities of the Ava Soil

Parent material: Peoria and Roxana Loess over drift
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature: 25 to 40 inches to a fragipan
Available water capacity: About 7.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Depth and months of highest perched seasonal high water table: 1.5 feet, January through April
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

14C3—Ava silty clay loam, 5 to 10 percent slopes, severely eroded

Setting

Landform and landscape: Till plains on uplands
Position on the landform: Shoulders, backslopes

Map Unit Composition

Ava and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that are redder and less brittle
- Moderately eroded soils that have a surface layer of silt loam
- Soils that are more sloping

Dissimilar soils:
- The somewhat poorly drained Bluford soils at the head of drainageways and on concave side slopes
- The somewhat poorly drained Belknap soils along drainageways

Properties and Qualities of the Ava Soil

Parent material: Peoria and Roxana Loess over drift
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature: 25 to 40 inches to a fragipan
Available water capacity: About 7.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Depth and months of highest perched seasonal high water table: 1.5 feet, January through April
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

15B—Parke silt loam, 2 to 5 percent slopes

Setting

Landform and landscape: Eskers on uplands
Position on the landform: Backslopes

Map Unit Composition

Parke and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that are moderately eroded and do not have an E horizon
- Soils that are 40 to 60 inches deep over drift
- Soils that have a higher base saturation

Dissimilar soils:
- The moderately well drained Ava soils on the lower backslopes

Properties and Qualities of the Parke Soil

Parent material: Loess and the underlying paleosol that formed in loamy outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

15C2—Parke silt loam, 5 to 10 percent slopes, eroded

Setting

Landform and landscape: Eskers on uplands
Position on the landform: Backslopes

Map Unit Composition

Parke and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Severely eroded soils that have a surface layer of silty clay loam
- Soils that are 40 to 60 inches deep over drift
- Soils that have a higher base saturation

Dissimilar soils:
- The moderately well drained Ava soils on the lower backslopes

Properties and Qualities of the Parke Soil

Parent material: Loess and the underlying paleosol that formed in loamy outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

15D2—Parke silt loam, 10 to 18 percent slopes, eroded

Setting

Landform and landscape: Eskers on uplands
Position on the landform: Backslopes

Map Unit Composition

Parke and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Severely eroded soils that have a surface layer of silty clay loam
- Soils that are 40 to 60 inches deep over drift
- Soils that have a higher base saturation

Dissimilar soils:
- The moderately well drained Ava soils on the lower backslopes

Properties and Qualities of the Parke Soil

Parent material: Loess and the underlying paleosol that formed in loamy outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

19F—Sylvan silt loam, 18 to 35 percent slopes

Setting

Landform and landscape: Loess bluffs on uplands
Position on the landform: Backslopes, shoulders

Map Unit Composition

Sylvan and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that are more acid
- Soils that contain more clay in the subsoil

Dissimilar soils:
- The well drained Navlys soils on concave backslopes and head slopes

Properties and Qualities of the Sylvan Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Potential for frost action: High
Hazard of corrosion: Low for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 6e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

53B—Bloomfield fine sand, 1 to 5 percent slopes

Setting

Landform and landscape: Dunes in dune fields
Position on the landform: Summits, shoulders

Map Unit Composition

Bloomfield and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain more clay
- Soils that are less sloping

Dissimilar soils:
- The somewhat poorly drained Roby soils in nearly level areas
- Soils in areas from which sand has been excavated

Properties and Qualities of the Bloomfield Soil

Parent material: Eolian sands
Drainage class: Somewhat excessively drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Moderately rapid or rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Low
Potential for frost action: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low

Susceptibility to water erosion: Low
Susceptibility to wind erosion: Very high

Interpretive Groups

Land capability classification: 3s
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

53C—Bloomfield fine sand, 5 to 10 percent slopes

Setting

Landform and landscape: Dunes in dune fields
Position on the landform: Summits, shoulders

Map Unit Composition

Bloomfield and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain more clay
- Soils that are less sloping

Dissimilar soils:
- The somewhat poorly drained Roby soils in nearly level areas
- Soils in areas from which sand has been excavated

Properties and Qualities of the Bloomfield Soil

Parent material: Eolian sands
Drainage class: Somewhat excessively drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Moderately rapid or rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Low
Potential for frost action: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Very high

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

53D—Bloomfield fine sand, 10 to 18 percent slopes

Setting

Landform and landscape: Dunes in dune fields
Position on the landform: Summits, shoulders

Map Unit Composition

Bloomfield and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain more clay
- Soils that are less sloping

Dissimilar soils:
- The somewhat poorly drained Roby soils in nearly level areas
- Soils in areas from which sand has been excavated

Properties and Qualities of the Bloomfield Soil

Parent material: Eolian sands
Drainage class: Somewhat excessively drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Moderately rapid or rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Low
Potential for frost action: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Very high

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

75B—Drury silt loam, 2 to 5 percent slopes

Setting

Landform and landscape: Loess hills in foothills
Position on the landform: Footslopes

Map Unit Composition

Drury and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain more clay
- Soils that are more sloping

Dissimilar soils:
- The moderately well drained Sciotoville soils in the lower positions on the landform
- The well drained Alford and Sylvan soils in the higher positions on the landform

Properties and Qualities of the Drury Soil

Parent material: Colluvium
Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Low
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

87A—Dickinson sandy loam, 0 to 2 percent slopes

Setting

Landform and landscape: Stream terraces on outwash plains
Position on the landform: Summits

Map Unit Composition

Dickinson and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain more silt and less sand in the subsoil
- Soils that contain more clay
- Soils that are more sloping

Dissimilar soils:
- The somewhat poorly drained Newhaven soils in the lower positions on the landform

Properties and Qualities of the Dickinson Soil

Parent material: Eolian sands and/or sandy alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 5.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Low
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2s
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

87B—Dickinson sandy loam, 2 to 5 percent slopes

Setting

Landform and landscape: Stream terraces on outwash plains
Position on the landform: Summits

Map Unit Composition

Dickinson and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain more silt and less sand in the subsoil
- Soils that contain more clay
- Soils that are more sloping

Dissimilar soils:
- The somewhat poorly drained Newhaven soils in the lower positions on the landform

Properties and Qualities of the Dickinson Soil

Parent material: Eolian sands and/or sandy alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 5.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Low
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

109A—Racoon silt loam, 0 to 2 percent slopes

Setting

Landform and landscape: Fans on uplands
Position on the landform: Footslopes

Map Unit Composition

Racoon and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a darker surface layer
- Soils that contain more clay

Dissimilar soils:
- The somewhat poorly drained Creal soils on the higher parts of the landform

Properties and Qualities of the Racoon Soil

Parent material: Mixture of loess and local silty colluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.5 percent
Shrink-swell potential: Moderate
Depth and months of highest apparent seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.2 foot
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where drained
Hydric soil status: Hydric

131A—Alvin fine sandy loam, 0 to 2 percent slopes

Setting

Landform and landscape: Hillsides in valleys
Position on the landform: Summits, shoulders

Map Unit Composition

Alvin and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain less clay and more sand in the subsoil
- Soils that are more sloping

Dissimilar soils:
- The somewhat poorly drained Roby soils in the lower, nearly level positions on the landform

Properties and Qualities of the Alvin Soil

Parent material: Loamy alluvium and/or eolian sands
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Potential for frost action: Moderate

Hazard of corrosion: Low for steel and high for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2s
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

131B—Alvin fine sandy loam, 2 to 5 percent slopes

Setting

Landform and landscape: Hillsides in valleys
Position on the landform: Summits, shoulders

Map Unit Composition

Alvin and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain less clay and more sand in the subsoil
- Soils that are more sloping

Dissimilar soils:
- The somewhat poorly drained Roby soils in the lower, nearly level positions on the landform

Properties and Qualities of the Alvin Soil

Parent material: Loamy alluvium and/or eolian sands
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and high for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

131C—Alvin fine sandy loam, 5 to 10 percent slopes

Setting

Landform and landscape: Hillsides in valleys
Position on the landform: Shoulders, backslopes

Map Unit Composition

Alvin and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain less clay and more sand in the subsoil
- Soils that are more sloping

Dissimilar soils:
- The somewhat poorly drained Roby soils in the lower, nearly level positions on the landform

Properties and Qualities of the Alvin Soil

Parent material: Loamy alluvium and/or eolian sands
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and high for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

131F—Alvin fine sandy loam, 18 to 35 percent slopes

Setting

Landform and landscape: Hillsides in valleys
Position on the landform: Backslopes

Map Unit Composition

Alvin and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain less clay and more sand in the subsoil
- Soils that are more sloping

Dissimilar soils:
- The well drained Berks soils on the lower backslopes

Properties and Qualities of the Alvin Soil

Parent material: Loamy alluvium and/or eolian sands
Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and high for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 6e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

142A—Patton silty clay loam, 0 to 2 percent slopes

Setting

Landform and landscape: Terraces on lake plains

Map Unit Composition

Patton and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a surface layer of silt loam
- Soils that have a lighter colored surface layer

Dissimilar soils:
- The somewhat poorly drained Henshaw soils on the higher parts of the landform
- Soils that are subject to rare flooding

Properties and Qualities of the Patton Soil

Parent material: Glaciolacustrine deposits
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 6.5 percent
Shrink-swell potential: Moderate
Depth and months of highest apparent seasonal high water table: At the surface, January through May
Ponding (average depth during the wettest periods or after heavy rainfall): 0.2 foot
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained
Hydric soil status: Hydric

142A+—Patton silt loam, 0 to 2 percent slopes, overwash

Setting

Landform and landscape: Terraces on lake plains

Map Unit Composition

Patton and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a surface layer of silty clay loam
- Soils that have a lighter colored surface layer

Dissimilar soils:
- The somewhat poorly drained Henshaw soils on the higher parts of the landform
- Soils that are subject to rare flooding

Properties and Qualities of the Patton Soil

Parent material: Glaciolacustrine deposits
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 6.5 percent
Shrink-swell potential: Moderate
Depth and months of highest apparent seasonal high water table: At the surface, January through May
Ponding (average depth during the wettest periods or after heavy rainfall): 0.2 foot
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained
Hydric soil status: Hydric

164A—Stoy silt loam, 0 to 2 percent slopes

Setting

Landform and landscape: Loess hills on uplands
Position on the landform: Summits

Map Unit Composition

Stoy and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that do not have fragic soil properties
- Soils that contain more clay in the subsoil
- Soils that are more sloping

Dissimilar soils:
- The moderately well drained Hosmer soils in the higher positions on the landform
- The poorly drained Weir soils on flats

Properties and Qualities of the Stoy Soil

Parent material: Loess
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate
Depth and months of highest perched seasonal high water table: 1 foot, January through May
Ponding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

164B—Stoy silt loam, 2 to 5 percent slopes

Setting

Landform and landscape: Loess hills on uplands
Position on the landform: Summits, shoulders

Map Unit Composition

Stoy and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that do not have fragic soil properties
- Soils that contain more clay in the subsoil
- Soils that are more sloping

Dissimilar soils:
- The moderately well drained Hosmer soils in the higher positions on the landform

Properties and Qualities of the Stoy Soil

Parent material: Loess
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate
Depth and months of highest perched seasonal high water table: 1 foot, January through May
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

165A—Weir silt loam, 0 to 2 percent slopes

Setting

Landform and landscape: Flats on uplands
Position on the landform: Summits

Map Unit Composition

Weir and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain less clay in the subsoil
- Soils that have a thicker surface layer and subsurface layer

Dissimilar soils:
- The somewhat poorly drained Stoy soils on the higher parts of the landform

Properties and Qualities of the Weir Soil

Parent material: Loess
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.5 percent
Shrink-swell potential: High
Depth and months of highest perched seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.2 foot
Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Not prime farmland
Hydric soil status: Hydric

173A—McGary silt loam, 0 to 2 percent slopes

Setting

Landform and landscape: Terraces on lake plains
Position on the landform: Backslopes

Map Unit Composition

McGary and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain less clay in the subsoil
- Soils that are more sloping
- Soils that are deeper to carbonates

Dissimilar soils:
- The well drained Markland soils in the slightly higher positions on the landform
- The poorly drained Sexton soils in slight depressions

Properties and Qualities of the McGary Soil

Parent material: Thin loess over lacustrine deposits
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Very slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: High
Depth and months of highest apparent seasonal high water table: 1 foot, January through May
Ponding: None
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained
Hydric soil status: Not hydric

173B2—McGary silt loam, 2 to 5 percent slopes, eroded

Setting

Landform and landscape: Terraces on lake plains
Position on the landform: Backslopes

Map Unit Composition

McGary and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain less clay in the subsoil
- Soils that are more sloping
- Soils that are deeper to carbonates

Dissimilar soils:
- The well drained Markland soils on the higher parts of the landform

Properties and Qualities of the McGary Soil

Parent material: Thin loess over lacustrine deposits
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Very slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: High
Depth and months of highest apparent seasonal high water table: 1 foot, January through May
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

176A—Marissa silt loam, 0 to 2 percent slopes

Setting

Landform and landscape: Terraces on lake plains

Map Unit Composition

Marissa and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain more clay in the subsoil

- Soils that are more sloping
- Soils that have a lighter colored surface layer

Dissimilar soils:

- The somewhat poorly drained Henshaw soils on slight rises

Properties and Qualities of the Marissa Soil

Parent material: Silty material
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow or moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3 to 4 percent
Shrink-swell potential: Moderate
Depth and months of highest apparent seasonal high water table: 1 foot, January through May
Ponding: None
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained
Hydric soil status: Not hydric

178A—Ruark loam, 0 to 2 percent slopes

Setting

Landform and landscape: Terraces on outwash plains
Position on the landform: Footslopes, summits

Map Unit Composition

Ruark and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that contain less clay and more sand in the subsoil
- Soils that have a higher pH

Dissimilar soils:

- The somewhat poorly drained Roby soils on the slightly higher parts of the landform

Properties and Qualities of the Ruark Soil

Parent material: Loamy alluvium and/or outwash
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Low
Depth and months of highest apparent seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.3 foot
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where drained
Hydric soil status: Hydric

184A—Roby fine sandy loam, 0 to 2 percent slopes

Setting

Landform and landscape: Terraces on outwash plains

Map Unit Composition

Roby and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain more clay and less sand in the subsoil
- Soils that are more sloping

Dissimilar soils:
- The well drained Alvin soils on the slightly higher parts of the landform
- The poorly drained Ruark soils in slight depressions

Properties and Qualities of the Roby Soil

Parent material: Outwash
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 6.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Depth and months of highest apparent seasonal high water table: 1 foot, January through May
Ponding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2s
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

208A—Sexton silt loam, 0 to 2 percent slopes

Setting

Landform and landscape: Terraces on outwash plains
Position on the landform: Summits

Map Unit Composition

Sexton and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain less clay and more sand in the subsoil
- Soils that have a higher pH

Dissimilar soils:
- The somewhat poorly drained Roby soils on the slightly higher parts of the landform

Properties and Qualities of the Sexton Soil

Parent material: Loess over outwash
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately slow to moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: High
Depth and months of highest perched seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.2 foot
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where drained
Hydric soil status: Hydric

214B—Hosmer silt loam, 2 to 5 percent slopes

Setting

Landform and landscape: Loess hills on uplands
Position on the landform: Summits, shoulders

Map Unit Composition

Hosmer and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that do not have brittleness in the subsoil

- Soils that are moderately eroded and do not have an E horizon
- Soils that are more sloping

Dissimilar soils:
- The somewhat poorly drained Stoy soils on broad, nearly level summits

Properties and Qualities of the Hosmer Soil

Parent material: Loess
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature: 20 to 36 inches to a fragipan
Available water capacity: About 8.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate
Depth and months of highest perched seasonal high water table: 1.5 feet, January through April
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Very high
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

214B2—Hosmer silt loam, 2 to 5 percent slopes, eroded

Setting

Landform and landscape: Loess hills on uplands
Position on the landform: Summits, shoulders

Map Unit Composition

Hosmer and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that do not have brittleness in the subsoil
- Soils that are slightly eroded and have an E horizon
- Soils that are more sloping

Dissimilar soils:
- The somewhat poorly drained Stoy soils on broad, nearly level summits

Properties and Qualities of the Hosmer Soil

Parent material: Loess
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature: 20 to 36 inches to a fragipan
Available water capacity: About 7.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate

Depth and months of highest perched seasonal high water table: 1.5 feet, January through April
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Very high
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

214C2—Hosmer silt loam, 5 to 10 percent slopes, eroded

Setting

Landform and landscape: Loess hills on uplands
Position on the landform: Shoulders, backslopes

Map Unit Composition

Hosmer and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that do not have brittleness in the subsoil
- Soils that are slightly eroded and have an E horizon
- Soils that are more sloping

Dissimilar soils:
- The somewhat poorly drained Stoy soils on concave backslopes

Properties and Qualities of the Hosmer Soil

Parent material: Loess
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature: 20 to 36 inches to a fragipan
Available water capacity: About 7.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate
Depth and months of highest perched seasonal high water table: 1.5 feet, January through April
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

214C3—Hosmer silt loam, 5 to 10 percent slopes, severely eroded

Setting

Landform and landscape: Loess hills on uplands
Position on the landform: Shoulders, backslopes

Map Unit Composition

Hosmer and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that do not have brittleness in the subsoil
- Soils that are moderately eroded
- Soils that are more sloping

Dissimilar soils:
- The somewhat poorly drained Stoy soils on concave side slopes
- The somewhat poorly drained Belknap soils along drainageways

Properties and Qualities of the Hosmer Soil

Parent material: Loess
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature: 20 to 36 inches to a fragipan
Available water capacity: About 7.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Moderate
Depth and months of highest perched seasonal high water table: 1.5 feet, January through April
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

231A—Evansville silt loam, 0 to 2 percent slopes

Setting

Landform and landscape: Flats on lake plains
Position on the landform: Summits

Map Unit Composition

Evansville and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain more sand in the surface layer
- Soils that contain more clay in the subsoil

Dissimilar soils:
- The somewhat poorly drained Henshaw soils on the higher parts of the landform

Properties and Qualities of the Evansville Soil

Parent material: Fine-silty alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Depth and months of highest apparent seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.2 foot
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained
Hydric soil status: Hydric

301B—Grantsburg silt loam, 2 to 5 percent slopes

Setting

Landform and landscape: Loess hills on uplands
Position on the landform: Summits, shoulders

Map Unit Composition

Grantsburg and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that do not have brittleness in the subsoil
- Soils that are moderately eroded and do not have an E horizon
- Soils that are more sloping

Dissimilar soils:
- The somewhat poorly drained Stoy soils on broad, nearly level summits

Properties and Qualities of the Grantsburg Soil

Parent material: Peoria and Roxana Loess over residuum
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Very slow or slow

Depth to restrictive feature: 24 to 40 inches to a fragipan
Available water capacity: About 8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Depth and months of highest perched seasonal high water table: 1.5 feet, January through April
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

308B—Alford silt loam, 2 to 5 percent slopes

Setting

Landform and landscape: Loess hills on uplands
Position on the landform: Summits, shoulders

Map Unit Composition

Alford and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have brittleness in the subsoil
- Soils that are moderately eroded and do not have an E horizon
- Soils that are more sloping

Dissimilar soils:
- The somewhat poorly drained Stoy soils on broad, nearly level summits

Properties and Qualities of the Alford Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

308B2—Alford silt loam, 2 to 5 percent slopes, eroded

Setting

Landform and landscape: Loess hills on uplands
Position on the landform: Shoulders, backslopes

Map Unit Composition

Alford and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have brittleness in the subsoil
- Severely eroded soils that have a surface layer of silty clay loam
- Soils that are more sloping

Dissimilar soils:
- The somewhat poorly drained Stoy soils on broad, nearly level summits

Properties and Qualities of the Alford Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

308C2—Alford silt loam, 5 to 10 percent slopes, eroded

Setting

Landform and landscape: Loess hills on uplands
Position on the landform: Shoulders, backslopes

Map Unit Composition

Alford and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have brittleness in the subsoil

- Severely eroded soils that have a surface layer of silty clay loam
- Soils that are more sloping

Dissimilar soils:

- The somewhat poorly drained Stoy soils on concave head slopes

Properties and Qualities of the Alford Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

308C3—Alford silt loam, 5 to 10 percent slopes, severely eroded

Setting

Landform and landscape: Loess hills on uplands
Position on the landform: Shoulders, backslopes

Map Unit Composition

Alford and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have brittleness in the subsoil
- Soils that are moderately eroded
- Soils that are more sloping

Dissimilar soils:

- The somewhat poorly drained Stoy soils on concave head slopes

Properties and Qualities of the Alford Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Moderate
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

308D2—Alford silt loam, 10 to 18 percent slopes, eroded

Setting

Landform and landscape: Loess hills on uplands
Position on the landform: Backslopes

Map Unit Composition

Alford and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have brittleness in the subsoil
- Severely eroded soils that have a surface layer of silty clay loam
- Soils that are more sloping

Dissimilar soils:
- The moderately well drained Hosmer soils on the upper backslopes

Properties and Qualities of the Alford Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

308D3—Alford silt loam, 10 to 18 percent slopes, severely eroded

Setting

Landform and landscape: Loess hills on uplands
Position on the landform: Backslopes

Map Unit Composition

Alford and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have brittleness in the subsoil
- Soils that are moderately eroded
- Soils that are more sloping

Dissimilar soils:
- The moderately well drained Hosmer soils on the upper backslopes

Properties and Qualities of the Alford Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Moderate
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

337A—Creal silt loam, 0 to 2 percent slopes

Setting

Landform and landscape: Fans on uplands
Position on the landform: Footslopes

Map Unit Composition

Creal and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain more clay in the subsoil

- Soils that are more sloping
- Soils that have a dark surface layer

Dissimilar soils:
- Soils that are subject to rare flooding
- The poorly drained Racoon soils in depressions

Properties and Qualities of the Creal Soil

Parent material: Mixture of loess and local silty alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Depth and months of highest apparent seasonal high water table: 1 foot, January through May
Ponding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained
Hydric soil status: Not hydric

339F—Wellston silt loam, 18 to 35 percent slopes

Setting

Landform and landscape: Hillslopes on uplands
Position on the landform: Backslopes

Map Unit Composition

Wellston and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have brittleness in the subsoil
- Severely eroded soils that have a surface layer of silty clay loam
- Soils that are more sloping

Dissimilar soils:
- The moderately well drained Hosmer soils on the upper backslopes

Properties and Qualities of the Wellston Soil

Parent material: Loess over residuum
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately slow or moderate
Depth to restrictive feature: 40 to 72 inches to lithic or paralithic bedrock
Available water capacity: About 8.7 inches to a depth of 60 inches

Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Low
Potential for frost action: High
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 6e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

340C2—Zanesville silt loam, 5 to 10 percent slopes, eroded

Setting

Landform and landscape: Hillslopes on uplands
Position on the landform: Shoulders, backslopes

Map Unit Composition

Zanesville and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that do not have brittleness in the subsoil
- Severely eroded soils that have a surface layer of silty clay loam
- Soils that are more sloping

Dissimilar soils:
- The moderately well drained Hosmer soils on the upper backslopes

Properties and Qualities of the Zanesville Soil

Parent material: Loess over residuum
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature: 19 to 32 inches to a fragipan; 40 to 80 inches to lithic or paralithic bedrock
Available water capacity: About 7.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Low
Depth and months of highest perched seasonal high water table: 1.5 feet, January through April
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

340C3—Zanesville silty clay loam, 5 to 10 percent slopes, severely eroded

Setting

Landform and landscape: Hillslopes on uplands
Position on the landform: Shoulders, backslopes

Map Unit Composition

Zanesville and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that do not have brittleness in the subsoil
- Moderately eroded soils that have a surface layer of silt loam
- Soils that are more sloping

Dissimilar soils:
- The moderately well drained Hosmer soils on the upper backslopes

Properties and Qualities of the Zanesville Soil

Parent material: Loess over residuum
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature: 19 to 32 inches to a fragipan; 40 to 80 inches to lithic or paralithic bedrock
Available water capacity: About 7.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Depth and months of highest perched seasonal high water table: 1.5 feet, January through April
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

340D2—Zanesville silt loam, 10 to 18 percent slopes, eroded

Setting

Landform and landscape: Hillslopes on uplands
Position on the landform: Backslopes

Map Unit Composition

Zanesville and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that do not have brittleness in the subsoil
- Severely eroded soils that have a surface layer of silty clay loam
- Soils that are more sloping

Dissimilar soils:
- The moderately well drained Hosmer soils on the upper backslopes

Properties and Qualities of the Zanesville Soil

Parent material: Loess over residuum
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature: 19 to 32 inches to a fragipan; 40 to 80 inches to lithic or paralithic bedrock
Available water capacity: About 7.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Low
Depth and months of highest perched seasonal high water table: 1.5 feet, January through April
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

340D3—Zanesville silty clay loam, 10 to 18 percent slopes, severely eroded

Setting

Landform and landscape: Hillslopes on uplands
Position on the landform: Backslopes

Map Unit Composition

Zanesville and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that do not have brittleness in the subsoil
- Moderately eroded soils that have a surface layer of silt loam
- Soils that are more sloping

Dissimilar soils:
- The moderately well drained Hosmer soils on the upper backslopes

Properties and Qualities of the Zanesville Soil

Parent material: Loess over residuum
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature: 19 to 32 inches to a fragipan; 40 to 80 inches to lithic or paralithic bedrock
Available water capacity: About 7.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Depth and months of highest perched seasonal high water table: 1.5 feet, January through April
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 6e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

434A—Ridgway silt loam, 0 to 2 percent slopes

Setting

Landform and landscape: Outwash terraces on outwash plains
Position on the landform: Summits, shoulders

Map Unit Composition

Ridgway and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have more sand in the surface layer and subsoil
- Soils that are more sloping

Dissimilar soils:
- The somewhat poorly drained Geff soils on broad, nearly level summits

Properties and Qualities of the Ridgway Soil

Parent material: Loess or other silty material over sandy outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: 36 to 80 inches to strongly contrasting textural stratification
Available water capacity: About 9.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Potential for frost action: High

Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

434B—Ridgway silt loam, 2 to 5 percent slopes

Setting

Landform and landscape: Outwash terraces on outwash plains
Position on the landform: Shoulders

Map Unit Composition

Ridgway and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have more sand in the surface layer and subsoil
- Soils that are more sloping

Dissimilar soils:
- The somewhat poorly drained Geff soils on broad, nearly level summits

Properties and Qualities of the Ridgway Soil

Parent material: Loess or other silty material over sandy outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: 36 to 80 inches to strongly contrasting textural stratification
Available water capacity: About 9.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

434C2—Ridgway silt loam, 5 to 10 percent slopes, eroded

Setting

Landform and landscape: Outwash terraces on outwash plains
Position on the landform: Backslopes, shoulders

Map Unit Composition

Ridgway and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have more sand in the surface layer and subsoil
- Soils that are more sloping
- Severely eroded soils that have a surface layer of silty clay loam

Dissimilar soils:
- The well drained Alvin soils on the lower parts of backslopes

Properties and Qualities of the Ridgway Soil

Parent material: Loess or other silty material over outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: 36 to 80 inches to strongly contrasting textural stratification
Available water capacity: About 9.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

436A—Meadowbank silt loam, 0 to 2 percent slopes

Setting

Landform and landscape: Stream terraces on outwash plains

Map Unit Composition

Meadowbank and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have more sand in the surface layer and subsoil
- Soils that are more sloping

Dissimilar soils:
- The somewhat poorly drained Newhaven soils in the slightly lower areas

Properties and Qualities of the Meadowbank Soil

Parent material: Loess over outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: 40 to 80 inches to strongly contrasting textural stratification
Available water capacity: About 10.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3 to 5 percent
Shrink-swell potential: Moderate
Potential for frost action: High
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

436B—Meadowbank silt loam, 2 to 5 percent slopes

Setting

Landform and landscape: Stream terraces on outwash plains

Map Unit Composition

Meadowbank and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have more sand in the surface layer and subsoil
- Soils that are more sloping

Dissimilar soils:
- The somewhat poorly drained Newhaven soils in nearly level areas

Properties and Qualities of the Meadowbank Soil

Parent material: Loess over outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: 40 to 80 inches to strongly contrasting textural stratification
Available water capacity: About 10.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3 to 5 percent
Shrink-swell potential: Moderate
Potential for frost action: High
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

445A—Newhaven loam, 0 to 2 percent slopes

Setting

Landform and landscape: Terraces on outwash plains

Map Unit Composition

Newhaven and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have more sand in the surface layer and subsoil
- Soils that are more sloping

Dissimilar soils:
- The well drained Meadowbank soils in the slightly higher positions
- The poorly drained Springerton soils in slight depressions

Properties and Qualities of the Newhaven Soil

Parent material: Loamy alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately rapid or rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3 to 4 percent
Shrink-swell potential: Moderate
Depth and months of highest apparent seasonal high water table: 1 foot, January through May
Ponding: None
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

446A—Springerton loam, 0 to 2 percent slopes

Setting

Landform and landscape: Terraces on outwash plains

Map Unit Composition

Springerton and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have more clay in the subsoil

- Soils that have a thinner and lighter colored surface layer
- Soils that have a surface layer of silt loam

Dissimilar soils:
- The somewhat poorly drained Newhaven soils on slight rises

Properties and Qualities of the Springerton Soil

Parent material: Outwash
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 4 to 6 percent
Shrink-swell potential: Moderate
Depth and months of highest apparent seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.2 foot
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained
Hydric soil status: Hydric

453B—Muren silt loam, 2 to 5 percent slopes

Setting

Landform and landscape: Loess hills on uplands
Position on the landform: Shoulders, summits

Map Unit Composition

Muren and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that are moderately eroded and do not have an E horizon
- Soils that are more sloping
- Soils that have a brittle layer in the subsoil

Dissimilar soils:
- The somewhat poorly drained Stoy soils on nearly level summits

Properties and Qualities of the Muren Soil

Parent material: Loess
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate
Depth and months of highest apparent seasonal high water table: 1 foot, January through April
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

467B2—Markland silt loam, 2 to 5 percent slopes, eroded

Setting

Landform and landscape: Terraces on lake plains
Position on the landform: Backslopes

Map Unit Composition

Markland and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that are slightly eroded and have an E horizon
- Severely eroded soils that have a surface layer of silty clay loam
- Soils that contain less clay in the subsoil
- Soils that do not have carbonates above a depth of 60 inches

Dissimilar soils:
- The somewhat poorly drained McGary soils on the lower, nearly level parts of the landform

Properties and Qualities of the Markland Soil

Parent material: Thin loess over fine textured lacustrine deposits
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow or moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: High
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

467C2—Markland silt loam, 5 to 10 percent slopes, eroded

Setting

Landform and landscape: Terraces on lake plains
Position on the landform: Backslopes

Map Unit Composition

Markland and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Severely eroded soils that have a surface layer of silty clay loam
- Soils that contain less clay in the subsoil
- Soils that do not have carbonates above a depth of 60 inches

Dissimilar soils:
- The somewhat poorly drained McGary soils on the lower concave slopes

Properties and Qualities of the Markland Soil

Parent material: Thin loess over fine textured lacustrine deposits
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow or moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: High
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

467C3—Markland silty clay loam, 5 to 10 percent slopes, severely eroded

Setting

Landform and landscape: Terraces on lake plains
Position on the landform: Backslopes

Map Unit Composition

Markland and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Moderately eroded soils that have a surface layer of silt loam
- Soils that contain less clay in the subsoil
- Soils that do not have carbonates above a depth of 60 inches

Dissimilar soils:
- The somewhat poorly drained McGary soils on the lower concave slopes

Properties and Qualities of the Markland Soil

Parent material: Thin loess over fine textured lacustrine deposits
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow or moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: High
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: Moderate
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 6e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

482B—Uniontown silt loam, 2 to 5 percent slopes

Setting

Landform and landscape: Stream terraces on lake plains
Position on the landform: Summits, shoulders

Map Unit Composition

Uniontown and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Severely eroded soils that have a surface layer of silty clay loam
- Soils that contain more sand in the surface layer and subsoil

Dissimilar soils:
- The somewhat poorly drained Henshaw soils on the lower parts of the landform

Properties and Qualities of the Uniontown Soil

Parent material: Calcareous alluvium
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow or moderate

Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Low
Depth and months of highest apparent seasonal high water table: 2 feet, January through April
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

482B2—Uniontown silt loam, 2 to 5 percent slopes, eroded

Setting

Landform and landscape: Stream terraces on lake plains
Position on the landform: Backslopes, shoulders

Map Unit Composition

Uniontown and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Severely eroded soils that have a surface layer of silty clay loam
- Soils that contain more sand in the surface layer and subsoil

Dissimilar soils:
- The somewhat poorly drained Henshaw soils on the lower parts of the landform

Properties and Qualities of the Uniontown Soil

Parent material: Calcareous alluvium
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow or moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Low
Depth and months of highest apparent seasonal high water table: 2 feet, January through April
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

482C2—Uniontown silt loam, 5 to 10 percent slopes, eroded

Setting

Landform and landscape: Stream terraces on lake plains
Position on the landform: Backslopes

Map Unit Composition

Uniontown and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Severely eroded soils that have a surface layer of silty clay loam
- Soils that contain more sand in the surface layer and subsoil

Dissimilar soils:
- The somewhat poorly drained Henshaw soils on the lower concave slopes

Properties and Qualities of the Uniontown Soil

Parent material: Calcareous alluvium
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow or moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Low
Depth and months of highest apparent seasonal high water table: 2 feet, January through April
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

482C3—Uniontown silty clay loam, 5 to 10 percent slopes, severely eroded

Setting

Landform and landscape: Stream terraces on lake plains
Position on the landform: Backslopes

Map Unit Composition

Uniontown and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Moderately eroded soils that have a surface layer of silt loam
- Soils that contain more sand in the surface layer and subsoil

Dissimilar soils:
- The somewhat poorly drained Henshaw soils on the lower concave slopes

Properties and Qualities of the Uniontown Soil

Parent material: Calcareous alluvium
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow or moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.5 percent
Shrink-swell potential: Low
Depth and months of highest apparent seasonal high water table: 2 feet, January through April
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

483A—Henshaw silt loam, 0 to 2 percent slopes

Setting

Landform and landscape: Lake terraces on lake plains
Position on the landform: Shoulders, summits

Map Unit Composition

Henshaw and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain more sand in the subsoil
- Soils that have carbonates below a depth of 60 inches

Dissimilar soils:
- The well drained Ridgway and moderately well drained Uniontown soils on the higher parts of the landform
- The poorly drained Patton soils in the lower areas and in slight depressions

Properties and Qualities of the Henshaw Soil

Parent material: Calcareous alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Low
Depth and months of highest apparent seasonal high water table: 1 foot, January through May
Ponding: None
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

484A—Harco silt loam, 0 to 2 percent slopes

Setting

Landform and landscape: Lake terraces on lake plains
Position on the landform: Summits, shoulders

Map Unit Composition

Harco and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain more clay in the subsoil
- Soils that are not calcareous above a depth of 60 inches

Dissimilar soils:
- The moderately well drained Uniontown soils in the slightly higher positions
- The poorly drained Montgomery and Patton soils in the lower areas and in slight depressions

Properties and Qualities of the Harco Soil

Parent material: Silty sediments
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3 to 5 percent
Shrink-swell potential: Moderate
Depth and months of highest apparent seasonal high water table: 1 foot, January through May

Ponding: None
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

585F—Negley loam, 18 to 35 percent slopes

Setting

Landform and landscape: Eskers on uplands
Position on the landform: Backslopes

Map Unit Composition

Negley and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Severely eroded soils that have a surface layer of clay loam
- Soils that have a surface layer of silt loam

Dissimilar soils:
- The well drained Hickory soils in landform positions similar to those of the Negley soil

Properties and Qualities of the Negley Soil

Parent material: Very thin loess and outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Low
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 6e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

630C3—Navlys silty clay loam, 5 to 10 percent slopes, severely eroded

Setting

Landform and landscape: Loess hills on uplands
Position on the landform: Shoulders, backslopes

Map Unit Composition

Navlys and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a surface layer of silt loam
- Soils that have more clay in the subsoil

Dissimilar soils:
- The well drained Sylvan soils on the steeper slopes

Properties and Qualities of the Navlys Soil

Parent material: Calcareous loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.8 to 2.0 percent
Shrink-swell potential: Moderate
Depth and months of highest apparent seasonal high water table: 4 feet, January through April
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

630D3—Navlys silty clay loam, 10 to 18 percent slopes, severely eroded

Setting

Landform and landscape: Loess hills on uplands
Position on the landform: Backslopes

Map Unit Composition

Navlys and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a surface layer of silt loam
- Soils that have more clay in the subsoil

Dissimilar soils:
- The well drained Sylvan soils on the steeper slopes

Properties and Qualities of the Navlys Soil

Parent material: Calcareous loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.8 to 2.0 percent
Shrink-swell potential: Moderate
Depth and months of highest apparent seasonal high water table: 4 feet, January through April
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

750A—Skelton fine sandy loam, 0 to 2 percent slopes

Setting

Landform and landscape: Stream terraces on outwash plains
Position on the landform: Summits

Map Unit Composition

Skelton and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a surface layer of silt loam or loam
- Soils that have more clay in the subsoil

Dissimilar soils:
- The somewhat poorly drained Crawleyville soils in the lower areas
- The poorly drained Ruark and Sexton soils in depressions

Properties and Qualities of the Skelton Soil

Parent material: Fine-loamy outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

750B—Skelton fine sandy loam, 2 to 5 percent slopes

Setting

Landform and landscape: Stream terraces on outwash plains
Position on the landform: Summits, shoulders

Map Unit Composition

Skelton and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a surface layer of silt loam or loam
- Soils that have more clay in the subsoil

Dissimilar soils:
- The somewhat poorly drained Crawleyville soils on the lower concave slopes

Properties and Qualities of the Skelton Soil

Parent material: Fine-loamy outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

750C2—Skelton fine sandy loam, 5 to 10 percent slopes, eroded

Setting

Landform and landscape: Stream terraces on outwash plains
Position on the landform: Backslopes

Map Unit Composition

Skelton and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a surface layer of silt loam or loam
- Soils that have more clay in the subsoil

Dissimilar soils:
- The somewhat poorly drained Crawleyville soils on the lower concave slopes

Properties and Qualities of the Skelton Soil

Parent material: Fine-loamy outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

751A—Crawleyville fine sandy loam, 0 to 2 percent slopes

Setting

Landform and landscape: Stream terraces on outwash plains
Position on the landform: Summits

Map Unit Composition

Crawleyville and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a surface layer of silt loam or loam
- Soils that have more clay in the subsoil

Dissimilar soils:
- The well drained Skelton soils on the higher parts of the landform
- The poorly drained Ruark soils in depressions

Properties and Qualities of the Crawleyville Soil

Parent material: Fine-loamy outwash
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.5 percent
Shrink-swell potential: Low
Depth and months of highest apparent seasonal high water table: 0.5 foot, January through May
Ponding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

784F—Berks loam, 18 to 35 percent slopes

Setting

Landform and landscape: Hillslopes on uplands
Position on the landform: Backslopes

Map Unit Composition

Berks and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that are more eroded
- Soils that are shallower to bedrock
- Soils that formed in loess over very thin drift that overlies bedrock

Dissimilar soils:
- The moderately well drained Sharon soils along drainageways
- The moderately well drained Zanesville soils on the upper backslopes

Properties and Qualities of the Berks Soil

Parent material: Residuum
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Depth to restrictive feature: 20 to 40 inches to lithic or paralithic bedrock
Available water capacity: About 2.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2 to 4 percent
Shrink-swell potential: Low

Potential for frost action: Moderate
Hazard of corrosion: Low for steel and high for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 6e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

802B—Orthents, loamy, undulating

This map unit consists of areas where soil material has been excavated and redeposited during sand and gravel mining operations, road construction, dam building, or other activities requiring mass disturbance of earthy material. Slopes are generally less than 7 percent. Typically, the surface layer is silt loam or loam. The underlying material is silt loam, loam, clay loam, or fine sandy loam. The soil properties and qualities listed below are average values. The values may be significantly different at any given site.

Setting

Landform and landscape: Fill, cut (road, railroad, etc.), leveled land
Position on the landform: Summits, shoulders, backslopes

Map Unit Composition

Orthents and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a seasonal high water table within a depth of 6 feet
- Soils that are more sloping

Dissimilar soils:
- Silty or clayey soils
- Small areas of undisturbed soils
- Excavated areas from which the topsoil and subsoil have been removed

Properties and Qualities of the Orthents

Parent material: Earthy fill
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Moderate
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

865—Pits, gravel

This map unit consists of nearly level and gently sloping areas from which gravel has been excavated and extracted. Some pits have nearly vertical sidewalls. Some pits are active, and others have been abandoned. Some contain water.

Map Unit Composition

Pits, gravel, and similar components: 90 percent
Dissimilar components: 10 percent

Components of Minor Extent

Similar components:
- Areas of the loamy Orthents

Dissimilar components:
- Areas of natural or undisturbed soils
- Small areas of water

898G—Sylvan-Hickory silt loams, 35 to 70 percent slopes

Setting

Landform and landscape: Loess bluffs on uplands
Position on the landform: Backslopes, shoulders

Map Unit Composition

Sylvan and similar soils: 45 percent
Hickory and similar soils: 40 percent
Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:
- Severely eroded soils that have a surface layer of silty clay loam
- Soils that are less sloping

Dissimilar soils:
- The well drained Alford soils on the upper backslopes
- The moderately well drained Sharon soils on flood plains

Properties and Qualities of the Sylvan Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate
Potential for frost action: High

Hazard of corrosion: Low for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Hickory Soil

Parent material: Loamy till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Sylvan—7e; Hickory—7e
Prime farmland category: Not prime farmland
Hydric soil status: Sylvan—not hydric; Hickory—not hydric

908G—Kell-Hickory silt loams, 35 to 70 percent slopes

Setting

Landform and landscape: Till plains on uplands
Position on the landform: Backslopes

Map Unit Composition

Kell and similar soils: 55 percent
Hickory and similar soils: 35 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that are less sloping
- Soils that have a surface layer of clay loam

Dissimilar soils:
- The somewhat poorly drained Belknap and moderately well drained Sharon soils on flood plains and along narrow drainageways

Properties and Qualities of the Kell Soil

Parent material: Drift over residuum
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Very slow to moderate
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Available water capacity: About 5.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 4 percent
Shrink-swell potential: Moderate

Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Hickory Soil

Parent material: Loamy till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Kell—7e; Hickory—7e
Prime farmland category: Not prime farmland
Hydric soil status: Kell—not hydric; Hickory—not hydric

929D3—Hickory-Ava complex, 10 to 18 percent slopes, severely eroded

Setting

Landform and landscape: Till plains on uplands
Position on the landform: Backslopes, shoulders

Map Unit Composition

Hickory and similar soils: 55 percent
Ava and similar soils: 35 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Moderately eroded soils that have a surface layer of silt loam
- Soils that do not have brittleness in the subsoil
- Soils that are more sloping or less sloping

Dissimilar soils:
- The somewhat poorly drained Belknap soils along drainageways and on flood plains

Properties and Qualities of the Hickory Soil

Parent material: Loamy till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.9 inches to a depth of 60 inches

Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Moderate
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Ava Soil

Parent material: Peoria and Roxana Loess over drift
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature: 25 to 40 inches to a fragipan
Available water capacity: About 7.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Depth and months of highest perched seasonal high water table: 1.5 feet, January through April
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Hickory—4e; Ava—4e
Prime farmland category: Not prime farmland
Hydric soil status: Hickory—not hydric; Ava—not hydric

1288A—Petrolia silty clay loam, undrained, 0 to 2 percent slopes, frequently flooded

Setting

Landform and landscape: Flood plains on alluvial plains

Map Unit Composition

Petrolia and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that are not subject to ponding
- Soils that are subject to occasional flooding
- Soils that have less clay

Dissimilar soils:
- The somewhat poorly drained Belknap soils in the slightly higher positions on the flood plains

Properties and Qualities of the Petrolia Soil

Parent material: Silty clay loam alluvium

Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2 to 3 percent
Shrink-swell potential: Moderate
Depth and months of highest apparent seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 1 foot
Frequency and most likely period of flooding: Frequent, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 5w
Prime farmland category: Not prime farmland
Hydric soil status: Hydric

3092A—Sarpy sandy loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform and landscape: Natural levees on alluvial plains

Map Unit Composition

Sarpy and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that are subject to occasional flooding
- Soils that have strata of loam, silt loam, or clay loam

Dissimilar soils:
- The well drained Armiesburg and Nolin soils on the slightly lower ridges or on natural levees

Properties and Qualities of the Sarpy Soil

Parent material: Sandy alluvium
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 4.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Frequency and most likely period of flooding: Frequent, November through May
Potential for frost action: Low
Hazard of corrosion: Low for steel and concrete

Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 4s
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

3103L—Houghton muck, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform and landscape: Flood plains on lake plains

Map Unit Composition

Houghton and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils with horizons that contain more sand
- Soils that have thinner organic horizons over mineral soil

Dissimilar soils:
- The poorly drained Ambraw soils in landform positions similar to those of the Houghton soil

Properties and Qualities of the Houghton Soil

Parent material: Herbaceous organic material over alluvium
Drainage class: Very poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow to moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 23.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 70 to 100 percent
Shrink-swell potential: Not estimated
Depth and months of highest apparent seasonal high water table: At the surface, November through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.5 foot
Frequency and most likely period of flooding: Frequent, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

Land capability classification: 8w
Prime farmland category: Not prime farmland
Hydric soil status: Hydric

3108A—Bonnie silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform and landscape: Flood plains on alluvial plains

Map Unit Composition

Bonnie and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a darker surface layer
- Soils that are less acid
- Soils that contain more sand
- Soils that are subject to occasional flooding

Dissimilar soils:
- The somewhat poorly drained Belknap soils in the slightly higher positions on the flood plains

Properties and Qualities of the Bonnie Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Low
Depth and months of highest apparent seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.5 foot
Frequency and most likely period of flooding: Frequent, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil status: Hydric

3142A—Patton silty clay loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform and landscape: Terraces on lake plains

Map Unit Composition

Patton and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that are subject to occasional flooding
- Soils that have a surface layer of silt loam
- Soils that have a thinner surface layer

Dissimilar soils:
- The somewhat poorly drained Henshaw and moderately well drained Uniontown soils on the higher parts of the landform

Properties and Qualities of the Patton Soil

Parent material: Glaciolacustrine deposits
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 6.5 percent
Shrink-swell potential: Moderate
Depth and months of highest apparent seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.2 foot
Frequency and most likely period of flooding: Frequent, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil status: Hydric

3178A—Ruark loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform and landscape: Terraces on outwash plains
Position on the landform: Footslopes, summits

Map Unit Composition

Ruark and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that are subject to occasional flooding

- Soils that contain less clay and more sand in the subsoil
- Soils that have a higher pH

Dissimilar soils:
- The somewhat poorly drained Roby soils on the slightly higher parts of the landform

Properties and Qualities of the Ruark Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Depth and months of highest apparent seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.3 foot
Frequency and most likely period of flooding: Frequent, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil status: Hydric

3231A—Evansville silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform and landscape: Flats on lake plains
Position on the landform: Summits

Map Unit Composition

Evansville and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain more sand in the surface layer
- Soils that contain more clay in the subsoil
- Soils that are subject to occasional flooding

Dissimilar soils:
- The somewhat poorly drained Henshaw soils on the higher parts of the landform

Properties and Qualities of the Evansville Soil

Parent material: Fine-silty alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Depth and months of highest apparent seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.2 foot
Frequency and most likely period of flooding: Frequent, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil status: Hydric

3302A—Ambraw clay loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform and landscape: Flood plains on alluvial plains

Map Unit Composition

Ambraw and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a surface layer of clay loam
- Soils that contain less sand in the subsoil

Dissimilar soils:
- Soils in slight depressions that are subject to ponding and stay wet most of the year

Properties and Qualities of the Ambraw Soil

Parent material: Loamy alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2 to 4 percent
Shrink-swell potential: Moderate
Depth and months of highest apparent seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.2 foot
Frequency and most likely period of flooding: Frequent, January through June

Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil status: Hydric

3304A—Landes fine sandy loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform and landscape: Natural levees on alluvial plains

Map Unit Composition

Landes and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain more silt in the surface layer and subsoil
- Soils that have a lighter colored surface layer

Dissimilar soils:
- The well drained Armiesburg soils in positions on the flood plains similar to those of the Landes soil

Properties and Qualities of the Landes Soil

Parent material: Loamy alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Low
Frequency and most likely period of flooding: Frequent, January through May
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where protected from flooding or not frequently flooded during the growing season
Hydric soil status: Not hydric

3331A—Haymond silt loam, 0 to 3 percent slopes, frequently flooded

Setting

Landform and landscape: Flood plains on alluvial plains

Map Unit Composition

Haymond and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that are subject to occasional flooding
- Soils that are more acid
- Soils that contain more sand

Dissimilar soils:
- The somewhat poorly drained Wakeland soils in slight depressions

Properties and Qualities of the Haymond Soil

Parent material: Silty alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 13.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Low
Frequency and most likely period of flooding: Frequent, January through May
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where protected from flooding or not frequently flooded during the growing season
Hydric soil status: Not hydric

3333A—Wakeland silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform and landscape: Flood plains on alluvial plains

Map Unit Composition

Wakeland and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a darker surface layer

- Soils that contain more sand
- Soils that are subject to occasional flooding
- Soils that are more acid

Dissimilar soils:
- The well drained Haymond soils in the slightly higher areas on the flood plains
- The poorly drained Birds soils in slight depressions

Properties and Qualities of the Wakeland Soil

Parent material: Silty alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Low
Depth and months of highest apparent seasonal high water table: 0.5 foot, January through May
Ponding: None
Frequency and most likely period of flooding: Frequent, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil status: Not hydric

3382A—Belknap silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform and landscape: Flood plains on alluvial plains

Map Unit Composition

Belknap and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a darker surface layer
- Soils that contain more sand
- Soils that are subject to occasional flooding
- Soils that are less acid

Dissimilar soils:
- The moderately well drained Sharon soils in the slightly higher areas on the flood plains
- The poorly drained Bonnie and Piopolis soils in slight depressions

Properties and Qualities of the Belknap Soil

Parent material: Silty alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow or moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Low
Depth and months of highest apparent seasonal high water table: 0.5 foot, January through May
Ponding: None
Frequency and most likely period of flooding: Frequent, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil status: Not hydric

3420A—Piopolis silty clay loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform and landscape: Flood plains on alluvial plains

Map Unit Composition

Piopolis and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a darker surface layer
- Soils that contain more sand
- Soils that are subject to occasional flooding
- Soils that are less acid

Dissimilar soils:
- The somewhat poorly drained Belknap soils on the slightly higher parts of the flood plains

Properties and Qualities of the Piopolis Soil

Parent material: Silty clay loam alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.6 inches to a depth of 60 inches

Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Depth and months of highest apparent seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.5 foot
Frequency and most likely period of flooding: Frequent, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil status: Hydric

3465A—Montgomery silty clay loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform and landscape: Lake plains on alluvial plains

Map Unit Composition

Montgomery and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have silt loam overwash
- Soils that contain more sand
- Soils that are subject to occasional flooding
- Soils that do not have carbonates

Dissimilar soils:
- The somewhat poorly drained McGary soils on slight rises

Properties and Qualities of the Montgomery Soil

Parent material: Lacustrine deposits
Drainage class: Very poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3 to 6 percent
Shrink-swell potential: High
Depth and months of highest apparent seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.5 foot
Frequency and most likely period of flooding: Frequent, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Medium

Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil status: Hydric

3524A—Zipp silty clay, 0 to 2 percent slopes, frequently flooded

Setting

Landform and landscape: Lake plains on alluvial plains
Position on the landform: Summits

Map Unit Composition

Zipp and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a darker surface layer
- Soils that contain more sand
- Soils that are subject to occasional flooding
- Soils that have silt loam overwash

Dissimilar soils:
- The somewhat poorly drained McGary soils on slight rises

Properties and Qualities of the Zipp Soil

Parent material: Fine textured lacustrine deposits
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Very slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: High
Depth and months of highest apparent seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.2 foot
Frequency and most likely period of flooding: Frequent, January through June
Potential for frost action: Moderate
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil status: Hydric

3597A—Armiesburg silty clay loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform and landscape: Flood plains on alluvial plains

Map Unit Composition

Armiesburg and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a light-colored surface layer
- Soils that contain more sand
- Soils that are subject to occasional flooding

Dissimilar soils:
- The somewhat poorly drained Newark soils along drainageways; in positions below those of the Armiesburg soil

Properties and Qualities of the Armiesburg Soil

Parent material: Alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2 to 4 percent
Shrink-swell potential: Moderate
Frequency and most likely period of flooding: Frequent, January through May
Potential for frost action: High
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where protected from flooding or not frequently flooded during the growing season
Hydric soil status: Not hydric

3601A—Nolin silty clay loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform and landscape: Flood plains on alluvial plains

Map Unit Composition

Nolin and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a darker and thicker surface layer
- Soils that contain more sand and less clay in the subsoil
- Soils that are subject to occasional flooding

Dissimilar soils:
- The somewhat poorly drained Newark soils along drainageways; in positions below those of the Nolin soil

Properties and Qualities of the Nolin Soil

Parent material: Fine-silty alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Low
Frequency and most likely period of flooding: Frequent, January through May
Potential for frost action: High
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where protected from flooding or not frequently flooded during the growing season
Hydric soil status: Not hydric

3602A—Newark silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform and landscape: Flood plains on alluvial plains

Map Unit Composition

Newark and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a light-colored surface layer
- Soils that contain less clay in the subsoil
- Soils that are subject to occasional flooding

Dissimilar soils:
- The well drained Nolin soils on slight rises
- The poorly drained Petrolia soils in slight depressions

Properties and Qualities of the Newark Soil

Parent material: Fine-silty alluvium
Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2 to 4 percent
Shrink-swell potential: Low
Depth and months of highest apparent seasonal high water table: 0.5 foot, January through May
Ponding: None
Frequency and most likely period of flooding: Frequent, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil status: Not hydric

3665A—Stonelick loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform and landscape: Flood plains on alluvial plains

Map Unit Composition

Stonelick and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a darker and thicker surface layer
- Soils that contain less sand and more silt in the underlying material
- Soils that are subject to occasional flooding

Dissimilar soils:
- The somewhat poorly drained Newark soils along drainageways

Properties and Qualities of the Stonelick Soil

Parent material: Alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Low
Frequency and most likely period of flooding: Frequent, January through May
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and concrete

Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where protected from flooding or not frequently flooded during the growing season
Hydric soil status: Not hydric

7087A—Dickinson sandy loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform and landscape: Stream terraces on outwash plains
Position on the landform: Summits

Map Unit Composition

Dickinson and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain more silt and less sand in the subsoil
- Soils that contain more clay
- Soils that are more sloping

Dissimilar soils:
- The somewhat poorly drained Newhaven soils in the lower positions on the landform

Properties and Qualities of the Dickinson Soil

Parent material: Eolian sands and/or sandy alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 5.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Low
Frequency and most likely period of flooding: Rare, January through May
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 3s
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

7109A—Racoon silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform and landscape: Fans on uplands
Position on the landform: Footslopes

Map Unit Composition

Racoon and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a darker surface layer
- Soils that contain more clay

Dissimilar soils:
- The somewhat poorly drained Creal soils on the higher parts of the landform

Properties and Qualities of the Racoon Soil

Parent material: Mixture of loess and local silty colluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.5 percent
Shrink-swell potential: Moderate
Depth and months of highest apparent seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.2 foot
Frequency and most likely period of flooding: Rare, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where drained
Hydric soil status: Hydric

7131A—Alvin fine sandy loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform and landscape: Terraces in valleys
Position on the landform: Summits

Map Unit Composition

Alvin and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
• Soils that contain less clay and more sand in the subsoil
• Soils that are more sloping
Dissimilar soils:
• The somewhat poorly drained Roby soils in the lower, nearly level positions on the landform

Properties and Qualities of the Alvin Soil

Parent material: Loamy alluvium and/or eolian sands
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Frequency and most likely period of flooding: Rare, January through May
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and high for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2s
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

7131B—Alvin fine sandy loam, 2 to 5 percent slopes, rarely flooded

Setting

Landform and landscape: Terraces in valleys
Position on the landform: Summits, shoulders

Map Unit Composition

Alvin and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
• Soils that contain less clay and more sand in the subsoil
• Soils that are more sloping
Dissimilar soils:
• The somewhat poorly drained Roby soils in the lower, nearly level positions on the landform

Properties and Qualities of the Alvin Soil

Parent material: Loamy alluvium and/or eolian sands
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid

Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Frequency and most likely period of flooding: Rare, January through May
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and high for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

7142A—Patton silty clay loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform and landscape: Terraces on lake plains

Map Unit Composition

Patton and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a surface layer of silt loam
- Soils that have a lighter colored surface layer

Dissimilar soils:
- The somewhat poorly drained Henshaw soils on the higher parts of the landform

Properties and Qualities of the Patton Soil

Parent material: Glaciolacustrine deposits
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 6.5 percent
Shrink-swell potential: Moderate
Depth and months of highest apparent seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.2 foot
Frequency and most likely period of flooding: Rare, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained
Hydric soil status: Hydric

7142A+—Patton silt loam, 0 to 2 percent slopes, rarely flooded, overwash

Setting

Landform and landscape: Terraces on lake plains

Map Unit Composition

Patton and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a surface layer of silty clay loam
- Soils that have a lighter colored surface layer

Dissimilar soils:
- The somewhat poorly drained Henshaw soils on the higher parts of the landform
- Soils that are subject to occasional flooding

Properties and Qualities of the Patton Soil

Parent material: Glaciolacustrine deposits
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 6.5 percent
Shrink-swell potential: Moderate
Depth and months of highest apparent seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.2 foot
Frequency and most likely period of flooding: Rare, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained
Hydric soil status: Hydric

7173A—McGary silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform and landscape: Terraces on lake plains
Position on the landform: Summits

Map Unit Composition

McGary and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain less clay in the subsoil
- Soils that are more sloping
- Soils that are deeper to carbonates

Dissimilar soils:
- The well drained Markland soils in the slightly higher positions
- The poorly drained Montgomery, Sexton, and Zipp soils in slight depressions

Properties and Qualities of the McGary Soil

Parent material: Thin loess over lacustrine deposits
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Very slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: High
Depth and months of highest apparent seasonal high water table: 1 foot, January through May
Ponding: None
Frequency and most likely period of flooding: Rare, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland where drained
Hydric soil status: Not hydric

7173B2—McGary silt loam, 2 to 5 percent slopes, eroded, rarely flooded

Setting

Landform and landscape: Terraces on lake plains
Position on the landform: Shoulders, backslopes

Map Unit Composition

McGary and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain less clay in the subsoil
- Soils that are more sloping
- Soils that are deeper to carbonates

Dissimilar soils:
- The well drained Markland soils on the higher parts of the landform

Properties and Qualities of the McGary Soil

Parent material: Thin loess over lacustrine deposits
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Very slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: High
Depth and months of highest apparent seasonal high water table: 1 foot, January through May
Frequency and most likely period of flooding: Rare, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

7176A—Marissa silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform and landscape: Terraces on lake plains

Map Unit Composition

Marissa and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain more clay in the subsoil
- Soils that are more sloping
- Soils that have a light-colored surface layer

Dissimilar soils:
- The somewhat poorly drained Henshaw soils on slight rises

Properties and Qualities of the Marissa Soil

Parent material: Silty material
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow or moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3 to 4 percent

Shrink-swell potential: Moderate
Depth and months of highest apparent seasonal high water table: 1 foot, January through May
Ponding: None
Frequency and most likely period of flooding: Rare, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained
Hydric soil status: Not hydric

7178A—Ruark loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform and landscape: Terraces on outwash plains
Position on the landform: Footslopes, summits

Map Unit Composition

Ruark and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain less clay and more sand in the subsoil
- Soils that have a higher pH

Dissimilar soils:
- The somewhat poorly drained Roby soils on the slightly higher parts of the landform

Properties and Qualities of the Ruark Soil

Parent material: Loamy alluvium and/or outwash
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Depth and months of highest apparent seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.3 foot
Frequency and most likely period of flooding: Rare, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where drained
Hydric soil status: Hydric

7184A—Roby fine sandy loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform and landscape: Terraces on outwash plains

Map Unit Composition

Roby and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain more clay and less sand in the subsoil
- Soils that are more sloping

Dissimilar soils:
- The well drained Alvin soils on the slightly higher parts of the landform
- The poorly drained Ruark soils in slight depressions

Properties and Qualities of the Roby Soil

Parent material: Outwash
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 6.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Depth and months of highest apparent seasonal high water table: 1 foot, January through May
Ponding: None
Frequency and most likely period of flooding: Rare, January through June
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2s
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

7208A—Sexton silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform and landscape: Terraces on outwash plains
Position on the landform: Summits

Map Unit Composition

Sexton and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain less clay and more sand in the subsoil
- Soils that have a higher pH

Dissimilar soils:
- The somewhat poorly drained Roby soils on the slightly higher parts of the landform

Properties and Qualities of the Sexton Soil

Parent material: Loess over outwash
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately slow to moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: High
Depth and months of highest perched seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.2 foot
Frequency and most likely period of flooding: Rare, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where drained
Hydric soil status: Hydric

7434A—Ridgway silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform and landscape: Outwash terraces on outwash plains
Position on the landform: Summits

Map Unit Composition

Ridgway and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have more sand in the surface layer and subsoil
- Soils that are more sloping

Dissimilar soils:
- The somewhat poorly drained Geff soils on broad, nearly level summits

Properties and Qualities of the Ridgway Soil

Parent material: Loess or other silty material over sandy outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: 36 to 80 inches to strongly contrasting textural stratification
Available water capacity: About 9.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Frequency and most likely period of flooding: Rare, January through May
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

7434B—Ridgway silt loam, 2 to 5 percent slopes, rarely flooded

Setting

Landform and landscape: Outwash terraces on outwash plains
Position on the landform: Shoulders

Map Unit Composition

Ridgway and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have more sand in the surface layer and subsoil
- Soils that are more sloping

Dissimilar soils:
- The somewhat poorly drained Geff soils on broad, nearly level summits

Properties and Qualities of the Ridgway Soil

Parent material: Loess or other silty material over sandy outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: 36 to 80 inches to strongly contrasting textural stratification
Available water capacity: About 9.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Frequency and most likely period of flooding: Rare, January through May
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low

Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

7436A—Meadowbank silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform and landscape: Stream terraces on outwash plains

Map Unit Composition

Meadowbank and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have more sand in the surface layer and subsoil
- Soils that are more sloping

Dissimilar soils:
- The somewhat poorly drained Newhaven soils in nearly level areas

Properties and Qualities of the Meadowbank Soil

Parent material: Loess over outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: 40 to 80 inches to strongly contrasting textural stratification
Available water capacity: About 10.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3 to 5 percent
Shrink-swell potential: Moderate
Frequency and most likely period of flooding: Rare, January through May
Potential for frost action: High
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

7445A—Newhaven loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform and landscape: Terraces on outwash plains

Map Unit Composition

Newhaven and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have more sand in the surface layer and subsoil
- Soils that are more sloping

Dissimilar soils:
- The well drained Meadowbank soils in the slightly higher positions
- The poorly drained Springerton soils in slight depressions

Properties and Qualities of the Newhaven Soil

Parent material: Loamy alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately rapid or rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3 to 4 percent
Shrink-swell potential: Moderate
Depth and months of highest apparent seasonal high water table: 1 foot, January through May
Ponding: None
Frequency and most likely period of flooding: Rare, January through June
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

7446A—Springerton loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform and landscape: Terraces on outwash plains

Map Unit Composition

Springerton and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have more clay in the subsoil
- Soils that have a thinner and lighter colored surface layer
- Soils that have a surface layer of silt loam

Dissimilar soils:
- The somewhat poorly drained Newhaven soils on slight rises

Properties and Qualities of the Springerton Soil

Parent material: Outwash
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 4 to 6 percent
Shrink-swell potential: Moderate
Depth and months of highest apparent seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.2 foot
Frequency and most likely period of flooding: Rare, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained
Hydric soil status: Hydric

7462A—Sciotoville silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform and landscape: Terraces in valleys
Position on the landform: Summits

Map Unit Composition

Sciotoville and similar soils: 95 percent
Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:
- Soils that are subject to occasional flooding
- Soils that have a thinner surface layer
- Soils that have more sand in the subsoil

Dissimilar soils:
- The well drained Alvin soils in landform positions similar to those of the Sciotoville soil
- The poorly drained Ginat soils in slight depressions

Properties and Qualities of the Sciotoville Soil

Parent material: Alluvium
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Low
Depth and months of highest perched seasonal high water table: 1.5 feet, January through April
Frequency and most likely period of flooding: Rare, January through May
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

7462B—Sciotoville silt loam, 2 to 5 percent slopes, rarely flooded

Setting

Landform and landscape: Terraces in valleys
Position on the landform: Summits, shoulders

Map Unit Composition

Sciotoville and similar soils: 95 percent
Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:
- Soils that are subject to occasional flooding
- Soils that have a thinner surface layer
- Soils that have more sand in the subsoil

Dissimilar soils:
- The well drained Alvin soils in landform positions similar to those of the Sciotoville soil

Properties and Qualities of the Sciotoville Soil

Parent material: Alluvium
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Low
Depth and months of highest perched seasonal high water table: 1.5 feet, January through April
Frequency and most likely period of flooding: Rare, January through May
Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

7465A—Montgomery silty clay loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform and landscape: Flood plains on alluvial plains

Map Unit Composition

Montgomery and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have silt loam overwash
- Soils that contain more sand
- Soils that are subject to occasional flooding
- Soils that do not have carbonates

Dissimilar soils:
- The somewhat poorly drained McGary soils on slight rises

Properties and Qualities of the Montgomery Soil

Parent material: Lacustrine deposits
Drainage class: Very poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3 to 6 percent
Shrink-swell potential: High
Depth and months of highest apparent seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.2 foot
Frequency and most likely period of flooding: Rare, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where drained
Hydric soil status: Hydric

7467B2—Markland silt loam, 2 to 5 percent slopes, eroded, rarely flooded

Setting

Landform and landscape: Terraces on lake plains
Position on the landform: Summits, shoulders, backslopes

Map Unit Composition

Markland and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that are slightly eroded and have an E horizon
- Severely eroded soils that have a surface layer of silty clay loam
- Soils that contain less clay in the subsoil
- Soils that do not have carbonates above a depth of 60 inches

Dissimilar soils:
- The somewhat poorly drained McGary soils on the lower, nearly level parts of the landform

Properties and Qualities of the Markland Soil

Parent material: Thin loess over fine textured lacustrine deposits
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow or moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: High
Frequency and most likely period of flooding: Rare, January through May
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

7467C2—Markland silt loam, 5 to 10 percent slopes, eroded, rarely flooded

Setting

Landform and landscape: Terraces on lake plains
Position on the landform: Backslopes

Map Unit Composition

Markland and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Severely eroded soils that have a surface layer of silty clay loam
- Soils that contain less clay in the subsoil
- Soils that do not have carbonates above a depth of 60 inches

Dissimilar soils:
- The somewhat poorly drained McGary soils on the lower concave slopes

Properties and Qualities of the Markland Soil

Parent material: Thin loess over fine textured lacustrine deposits
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow or moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: High
Frequency and most likely period of flooding: Rare, January through May
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

7482B—Uniontown silt loam, 2 to 5 percent slopes, rarely flooded

Setting

Landform and landscape: Stream terraces on lake plains
Position on the landform: Summits

Map Unit Composition

Uniontown and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Severely eroded soils that have a surface layer of silty clay loam
- Soils that contain more sand in the surface layer and subsoil

Dissimilar soils:
- The somewhat poorly drained Henshaw soils on the lower parts of the landform

Properties and Qualities of the Uniontown Soil

Parent material: Calcareous alluvium
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow or moderate

Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Low
Depth and months of highest apparent seasonal high water table: 2 feet, January through April
Frequency and most likely period of flooding: Rare, January through May
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

7482C2—Uniontown silt loam, 5 to 10 percent slopes, eroded, rarely flooded

Setting

Landform and landscape: Stream terraces on lake plains
Position on the landform: Backslopes

Map Unit Composition

Uniontown and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Severely eroded soils that have a surface layer of silty clay loam
- Soils that contain more sand in the surface layer and subsoil

Dissimilar soils:
- The somewhat poorly drained Henshaw soils on the lower concave slopes

Properties and Qualities of the Uniontown Soil

Parent material: Calcareous alluvium
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow or moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Low
Depth and months of highest apparent seasonal high water table: 2 feet, January through April
Frequency and most likely period of flooding: Rare, January through May
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium

Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

7483A—Henshaw silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform and landscape: Flood-plain steps on alluvial plains
Position on the landform: Summits

Map Unit Composition

Henshaw and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain more sand in the subsoil
- Soils that do not have carbonates above a depth of 60 inches

Dissimilar soils:
- The well drained Ridgway and moderately well drained Uniontown soils on the higher parts of the landscape
- The poorly drained Ginat and Patton soils in slight depressions

Properties and Qualities of the Henshaw Soil

Parent material: Calcareous alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Low
Depth and months of highest apparent seasonal high water table: 0.5 foot, January through May
Ponding: None
Frequency and most likely period of flooding: Rare, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

7484A—Harco silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform and landscape: Terraces on lake plains
Position on the landform: Backslopes

Map Unit Composition

Harco and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that contain more clay in the subsoil
- Soils that are not calcareous above a depth of 60 inches

Dissimilar soils:
- The moderately well drained Uniontown soils in the slightly higher positions
- The poorly drained Patton soils in slight depressions

Properties and Qualities of the Harco Soil

Parent material: Silty sediments
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3 to 5 percent
Shrink-swell potential: Moderate
Depth and months of highest apparent seasonal high water table: 1 foot, January through May
Ponding: None
Frequency and most likely period of flooding: Rare, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

7524A—Zipp silty clay, 0 to 2 percent slopes, rarely flooded

Setting

Landform and landscape: Lake plains on alluvial plains

Map Unit Composition

Zipp and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a darker surface layer
- Soils that contain more sand
- Soils that are subject to occasional flooding
- Soils that have silt loam overwash

Dissimilar soils:
- The somewhat poorly drained McGary soils on slight rises

Properties and Qualities of the Zipp Soil

Parent material: Fine textured lacustrine deposits
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Very slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: High
Depth and months of highest apparent seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.2 foot
Frequency and most likely period of flooding: Rare, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where drained
Hydric soil status: Hydric

7524A+—Zipp silt loam, 0 to 2 percent slopes, rarely flooded, overwash

Setting

Landform and landscape: Lake plains on alluvial plains

Map Unit Composition

Zipp and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a darker surface layer
- Soils that contain more sand in the subsoil
- Soils that are subject to occasional flooding
- Soils that have loam overwash

Dissimilar soils:
- The somewhat poorly drained McGary soils on slight rises

Properties and Qualities of the Zipp Soil

Parent material: Fine textured lacustrine deposits
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.5 percent
Shrink-swell potential: High
Depth and months of highest apparent seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.2 foot
Frequency and most likely period of flooding: Rare, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where drained
Hydric soil status: Hydric

7750A—Skelton fine sandy loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform and landscape: Stream terraces on outwash plains

Map Unit Composition

Skelton and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a surface layer of silt loam or loam
- Soils that have more clay in the subsoil

Dissimilar soils:
- The somewhat poorly drained Crawleyville soils on the lower concave slopes
- The poorly drained Ruark and Sexton soils in slight depressions

Properties and Qualities of the Skelton Soil

Parent material: Fine-loamy outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate

Frequency and most likely period of flooding: Rare, January through May
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

7750B—Skelton fine sandy loam, 2 to 5 percent slopes, rarely flooded

Setting

Landform and landscape: Stream terraces on outwash plains

Map Unit Composition

Skelton and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a surface layer of silt loam or loam
- Soils that have more clay in the subsoil

Dissimilar soils:
- The somewhat poorly drained Crawleyville soils on the lower concave slopes

Properties and Qualities of the Skelton Soil

Parent material: Fine-loamy outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate
Frequency and most likely period of flooding: Rare, January through May
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

7750C2—Skelton fine sandy loam, 5 to 10 percent slopes, eroded, rarely flooded

Setting

Landform and landscape: Stream terraces on outwash plains

Map Unit Composition

Skelton and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a surface layer of silt loam or loam
- Soils that have more clay in the subsoil

Dissimilar soils:
- The somewhat poorly drained Crawleyville soils on the lower concave slopes

Properties and Qualities of the Skelton Soil

Parent material: Fine-loamy outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate
Frequency and most likely period of flooding: Rare, January through May
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

7751A—Crawleyville fine sandy loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform and landscape: Stream terraces on outwash plains

Map Unit Composition

Crawleyville and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a surface layer of silt loam or loam
- Soils that have more clay in the subsoil

Dissimilar soils:
- The well drained Skelton soils on the higher parts of the landform
- The poorly drained Ruark soils in slight depressions

Properties and Qualities of the Crawleyville Soil

Parent material: Fine-loamy outwash
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.5 percent
Shrink-swell potential: Low
Depth and months of highest apparent seasonal high water table: 0.5 foot, January through May
Ponding: None
Frequency and most likely period of flooding: Rare, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

7787A—Banlic silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform and landscape: Flood plains on alluvial plains

Map Unit Composition

Banlic and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that do not have brittleness in the subsoil
- Soils that contain more sand
- Soils that are subject to occasional flooding

Dissimilar soils:
- The well drained Haymond soils in the slightly higher positions on the landform
- The poorly drained Bonnie soils in slight depressions

Properties and Qualities of the Banlic Soil

Parent material: Alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Low
Depth and months of highest perched seasonal high water table: 0.5 foot, January through May
Ponding: None
Frequency and most likely period of flooding: Rare, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained
Hydric soil status: Not hydric

7812E—Typic Hapludalfs, 10 to 30 percent slopes, rarely flooded

Setting

Landform and landscape: Terraces

Map Unit Composition

Typic Hapludalfs and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that are subject to occasional flooding
- Soils that are not calcareous above a depth of 60 inches
- Soils that have a seasonal high water table at a depth of less than 4 feet

Dissimilar soils:
- The somewhat poorly drained Belknap and moderately well drained Sharon soils along drainageways

Properties and Qualities of the Typic Hapludalfs

Parent material: Lacustrine deposits
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow to moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Frequency and most likely period of flooding: Rare, January through May
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and concrete

Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 6e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

8072A—Sharon silt loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform and landscape: Flood plains on alluvial plains

Map Unit Composition

Sharon and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have sandy overwash
- Soils that have thin horizons of sand or gravel
- Soils that are subject to frequent flooding

Dissimilar soils:
- The somewhat poorly drained Belknap soils in slight depressions

Properties and Qualities of the Sharon Soil

Parent material: Silty alluvium
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 3.0 percent
Shrink-swell potential: Low
Depth and months of highest apparent seasonal high water table: 3 feet, January through April
Frequency and most likely period of flooding: Occasional, January through May
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

8460A—Ginat silt loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform and landscape: Terraces in valleys
Position on the landform: Summits

Map Unit Composition

Ginat and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that are subject to rare flooding
- Soils that have a surface layer of loam or very fine sandy loam

Dissimilar soils:
- The moderately well drained Sciotoville soils on the slightly higher parts of the landform

Properties and Qualities of the Ginat Soil

Parent material: Silty alluvium over loamy alluvium and/or clayey alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Depth and months of highest perched seasonal high water table: At the surface, January through June
Ponding (average depth during the wettest periods or after heavy rainfall): 0.2 foot
Frequency and most likely period of flooding: Occasional, January through June
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where drained
Hydric soil status: Hydric

M-W—Miscellaneous water

This map unit consists of manmade areas that are used for industrial, sanitary, or mining applications and that contain water most of the year.

W—Water

This map unit consists of natural water bodies and impoundments generally used for livestock water supplies, as wetland wildlife habitat, or for recreational purposes.

Use and Management of the Soils

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as forestland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; and as wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of gravel, sand, reclamation material, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

Interpretive Ratings

The interpretive tables in this survey rate the soils in the survey area for various uses. Many of the tables identify the limitations that affect specified uses and indicate the severity of those limitations. The ratings in these tables are both verbal and numerical.

Rating Class Terms

Rating classes are expressed in the tables in terms that indicate the extent to which the soils are limited by all of the soil features that affect a specified use or in terms that indicate the suitability of the soils for the use. Thus, the tables may show limitation classes or suitability classes. Terms for the limitation classes are *not limited, somewhat limited,* and *very limited* or *slight, moderate,* and *severe*. The suitability ratings are expressed as *well suited, moderately suited, poorly suited,* and *unsuited* or as *good, fair,* and *poor*.

Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

Crops and Pasture

General management needed for crops and pasture is suggested in this section. The estimated yields of the main crops and pasture plants are listed for each soil, the system of land capability classification used by the Natural Resources Conservation Service is explained, and prime farmland is described.

Planners of management systems for individual fields or farms should consider obtaining specific information from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

The soils in White County have good potential for continued crop production, especially if the latest crop production technology is applied. This soil survey can be used as a guide for applying the latest crop production technology.

The demand for food and fiber has increased in recent years. As a result, some land of marginal quality has been used for crops. Much of this land is more susceptible to erosion than the more productive land. In addition, the number of residential tracts has increased throughout the county. These tracts commonly are in areas of prime farmland. If these trends continue, they could result in a significant decline in the quality and quantity of the land used for food and fiber.

Limitations Affecting Cropland and Pastureland

The management concerns affecting the use of the detailed soil map units in the survey area for crops and pasture are shown in table 5.

Cropland

The main concerns affecting the management of cropland in White County include crusting, flooding, ponding, poor tilth, water erosion, and wetness. Equipment limitations, high pH, limited available water capacity, limited rooting depth, low pH, restricted permeability, subsidence, and wind erosion are additional concerns.

Crusting occurs when flowing water or raindrops break down soil structural units, moving clay downward and leaving a concentration of sand and silt particles on the surface. Crusts can reduce the rate of water infiltration, increase the runoff rate, inhibit seedling emergence and proper growth, and reduce oxygen diffusion to seedlings.

Practices that minimize surface crusting protect the surface from the impact of raindrops and flowing water. Incorporating green manure crops, manure, or crop residue into the soil and using a system of conservation tillage help to prevent crusting by improving tilth.

Flooding occurs in unprotected areas along major rivers and their tributaries. Levees or diversions reduce the extent of crop damage caused by floodwater. Surface drainage ditches can remove floodwater if suitable outlets are available. Management of drainage in conformance with regulations influencing wetlands may require special permits and extra planning. Selecting crop varieties adapted to a shorter growing season and wetter conditions can also reduce the extent of damage caused by flooding.

Ponding is a hazard in areas where the seasonal high water table is above the surface. Land grading helps to control ponding. Surface ditches and surface inlet tile also help to remove excess water if suitable outlets are available. Management of drainage in conformance with regulations influencing wetlands may require special permits and extra planning.

Poor tilth can occur in soils when part of the subsoil is incorporated into the plow layer, typically as a result of the thinning of the surface layer by erosion. The incorporation of subsoil material into the plow layer reduces the content of organic matter and increases the content of clay in the surface soil. Intensive rainfall can result in the formation of a crust on the surface. Poor tilth also occurs in poorly drained soils that have a high content of clay, regardless of organic matter content, and in soils that have been excessively tilled. Poor tilth reduces the rate of water infiltration and increases the runoff rate and the hazard of erosion in the more sloping areas. Soils with poor tilth generally have a surface layer that is sticky when wet and hard and cloddy when dry. Because they can be tilled only within a narrow range in moisture content, seedbed preparation is difficult. Regularly returning crop residue to the soil, adding other organic material to the soil, minimizing tillage, and timing conservation tillage operations to near optimal soil moisture conditions can improve tilth.

Water erosion can occur if the surface soil is not protected against the impact of raindrops. Erosion reduces the stability of soil aggregates, which reduces the rate of water infiltration and increases the rate of surface runoff. Soils with long or steep slopes are more susceptible than other soils to water erosion. Erosion, primarily sheet and rill erosion, removes the surface soil, which commonly has the highest amount of biological activity and the highest content of organic matter. The productivity of the soil is reduced as the content of organic matter and the level of natural fertility are lowered. Poor tilth and crusting can occur when the subsoil, which generally has a higher content of clay than the surface soil, is incorporated through tillage into the plow layer. Excessive runoff can impact the quality of surface water through sedimentation and contamination by pesticides.

Erosion can be controlled by a system of conservation tillage that leaves crop residue on the surface after planting or by a cropping system that includes rotations of grasses and legumes in the cropping sequence. On soils with long, uniform slopes, contour farming and/or terraces in combination with a conservation tillage system can help to control erosion.

Wetness is a limitation when the seasonal high water table is at or near the surface. Subsurface tile drains can lower the seasonal high water table if suitable outlets are available. In soils that have a high content of clay and restricted permeability, subsurface drainage may not be practical. In these soils, surface ditches can reduce the wetness. Management of drainage in conformance with regulations influencing wetlands may require special permits and extra planning.

Additional management concerns are as follows:

Equipment limitations occur in areas that have slopes of more than 18 percent or where the soil has rock fragments in the surface layer. These limitations can cause rapid wear of equipment and can present problems with fertilization, harvest, and seedbed preparation. Equipment limitations cannot be easily overcome.

High pH can affect the availability of many plant nutrients and influences the effectiveness of herbicides. More frequent applications of a small amount of fertilizer are needed to correct nutrient imbalances. Crops may respond well to additions of phosphate fertilizer in areas where the soils are limited by a high pH. The applications of herbicides should be adjusted as the level of alkalinity increases. Incorporating green manure crops, manure, or crop residue into the soil, applying a system of conservation tillage, and using conservation cropping systems also help to overcome this limitation.

Limited (very low, low, or moderate) available water capacity can occur in soils that have a high content of sand, a low content of clay, and a low content of organic matter. Reducing the evaporation and runoff rates and increasing the rate of water infiltration can conserve soil moisture. Measures that conserve soil moisture include applying conservation tillage and conservation cropping systems, establishing field windbreaks, and leaving crop residue on the surface.

Limited rooting depth is a concern in areas where the soil has a fragipan or a layer of sand and gravel within a depth of 40 inches. These characteristics can limit the total amount of moisture available to plants. This limitation cannot be easily overcome. Planting cover crops and using a system of conservation tillage that leaves crop residue on the surface after planting increase the rate of water infiltration, reduce the runoff rate, and conserve moisture. Also, planting drought-tolerant crop species helps to make the most efficient use of the limited supply of moisture in the soil.

Low pH can create toxicity or decreased availability of nutrients, either of which can affect the health and vigor of the plants. Applications of lime can help to overcome this limitation. The form of lime and the timing, amount, and method of application should be based on the results of soil testing and on the type of crop to be grown.

Restricted permeability can increase the susceptibility of the soil to erosion and limit the effectiveness of drainage systems. The hazard of erosion can be reduced by incorporating green manure crops, manure, or crop residue into the soil; applying a system of conservation tillage; and using conservation cropping systems. Spacing the tile at narrow intervals improves the ability of the drainage system to lower the seasonal high water table.

Subsidence is the loss or settlement of organic soil layers through oxidation of the organic material. Saturating the organic layers by raising the water table during periods other than the cropping season can minimize the oxidation.

Wind erosion can occur in areas where the surface of the soil is not protected. Wind erosion can be controlled by applying a system of conservation tillage that leaves crop residue on the surface after planting, by using tillage systems that leave the surface rough, by establishing field windbreaks, and by regularly adding organic material to the soil.

Following are explanations of the criteria used to determine the limitations listed in the table.

Crusting.—The average content of organic matter in the surface layer is less than or equal to 2.5 percent, and the content of clay is between 20 and 35 percent.

Equipment limitation.—The slope is more than 18 percent, or the content of rock fragments in the surface layer is 15 percent or more.

Flooding.—The soil is subject to occasional or frequent flooding.

High pH.—The upper limit of pH within a depth of 40 inches is more than 8.3.

Limited available water capacity.—The available water capacity calculated to a depth of 60 inches or to a root-limiting layer is 9 inches or less.

Limited rooting depth.—A layer that restricts the penetration of plant roots is within a depth of 40 inches.

Low pH.—The lower limit of pH is less than or equal to 5.5 in one or more layers within a depth of 40 inches.

Ponding.—Water is above the surface. The upper limit of the ponding depth is more than 0 inches.

Poor tilth.—The content of clay in the surface layer is 27 percent or more.

Restricted permeability.—Permeability is less than 0.2 inch per hour between the surface and a depth of 40 inches.

Subsidence.—The soil has an organic layer within a depth of 60 inches.

Water erosion.—The Kw factor multiplied by the slope is more than 0.8, and the slope is 3 percent or more.

Wetness.—The seasonal high water table is within a depth of 1.5 feet at some time during the growing season during normal years.

Wind erosion.—The wind erodibility group is 1 or 2.

Erosion factors (e.g., the Kw factor) and wind erodibility groups are described under the heading “Physical Properties.”

Pastureland

The main concerns in managing pastureland in White County are low pH, water erosion, and wetness. Additional management concerns include equipment limitations, flooding, high pH, limited available water capacity, limited rooting depth, ponding, restricted trafficability, subsidence, and wind erosion.

Low pH can reduce the solubility and availability of nutrients for plant growth. Selecting adapted forage and hay varieties and applying lime according to the results of soil tests can help to overcome this limitation.

Water erosion can occur in overgrazed areas or during pasture establishment and renovation if the surface soil is not protected against the impact of raindrops. It results in poor tilth, which reduces the rate of water infiltration and increases the runoff rate. Soils with long or steep slopes also are susceptible to water erosion. Erosion can be controlled by deferred grazing, which prevents overgrazing and thus also helps to prevent surface compaction and excessive runoff and erosion. Tilling on the contour, using a no-till system of seeding when a seedbed is prepared or the pasture is renovated, and selecting adapted forage and hay varieties also help to control erosion.

Wetness occurs when the seasonal high water table is at or near the surface. Subsurface tile drains can lower the seasonal high water table if suitable outlets are available. Management of drainage in conformance with regulations influencing wetlands may require special permits and extra planning. Selecting forage and hay varieties adapted to wet conditions can improve forage production. Restricting use during wet periods helps to keep the pasture in good condition.

Additional management concerns are as follows:

Equipment limitations can cause rapid wear of equipment and can present problems with fertilization, harvest, pasture renovation, and seedbed preparation. Equipment limitations cannot be easily overcome.

Flooding occurs in unprotected areas along the major rivers and their tributaries. Surface drainage ditches can help to remove floodwater if suitable outlets are available. Management of drainage in conformance with regulations influencing wetlands may require special permits and extra planning. Selecting forage and hay varieties adapted to a shorter growing season and wetter conditions also reduces the extent of flood damage. Restricted use during wet periods helps to keep the pasture in good condition.

High pH affects the availability of many nutrients for plant growth. More frequent applications of a small amount of fertilizer are needed to correct nutrient imbalances. Selecting adapted forage and hay varieties helps to overcome this limitation.

Limited (low or very low) available water capacity can occur in soils that have a high content of sand, a low content of clay, and a low content of organic matter. Reducing the evaporation and runoff rates and increasing the rate of water infiltration can conserve soil moisture. Specific measures that conserve soil moisture include applying conservation tillage and conservation cropping systems, establishing field windbreaks, and leaving crop residue on the surface.

Limited rooting depth is a concern in areas where the soil has a fragipan or a layer of sand and gravel within a depth of 40 inches. These characteristics can limit the total amount of moisture available to plants. This limitation cannot be easily overcome. Planting cover crops and using a system of conservation tillage that leaves crop residue on the surface after planting increase the rate of water infiltration, reduce the

runoff rate, and conserve moisture. Also, planting drought-tolerant crop species helps to make the most efficient use of the limited supply of moisture in the soil.

Ponding occurs when the seasonal high water table is above the surface. Land grading helps to control ponding. Surface ditches and surface inlet tile also help to remove excess water if suitable outlets are available. Management of drainage in conformance with regulations influencing wetlands may require special permits and extra planning. Selecting forage and hay varieties adapted to wet conditions can improve forage production. Restricting use during wet periods helps to keep the pasture in good condition.

Restricted trafficability is a concern in areas where the soils are subject to wetness and have a loamy, clayey, or organic surface layer. Trafficability refers to the ability of the soil to support both livestock and machinery. The proper location of livestock facilities (watering, feeding, and shelter) helps to minimize surface compaction or the formation of ruts and helps to prevent damage to pasture crops.

Subsidence is the loss or settlement of organic soil layers through oxidation of the organic material. Saturating the organic layers by raising the water table during periods other than the cropping season can minimize the oxidation.

Wind erosion can occur in overgrazed areas or during pasture establishment and renovation if the surface of the soil is not protected. Wind erosion can be controlled by applying a system of conservation tillage that leaves residue on the surface after planting, by using tillage systems that leave the surface rough, by establishing field windbreaks, and by regularly adding organic material to the soil.

Following are explanations of the criteria used to determine the limitations listed in the table.

Equipment limitation.—The slope is more than 18 percent.

Flooding.—The soil is subject to occasional or frequent flooding.

High pH.—The upper limit of pH within a depth of 40 inches is more than 8.3.

Limited available water capacity.—The available water capacity calculated to a depth of 60 inches or to a root-limiting layer is 6 inches or less.

Limited rooting depth.—A layer that restricts the penetration of plant roots is within a depth of 40 inches.

Low pH.—The lower limit of pH within a depth of 40 inches is less than or equal to 5.5.

Ponding.—Water is above the surface. The upper limit of the ponding depth is more than 0 inches.

Restricted trafficability.—The soil is somewhat poorly drained, poorly drained, or very poorly drained and has a loamy, clayey, or organic surface layer.

Water erosion.—The Kw factor multiplied by the slope is more than 1, and the slope is 3 percent or more.

Wetness.—The seasonal high water table is within a depth of 1.5 feet.

Wind erosion.—The wind erodibility group is 1 or 2.

Erosion factors (e.g., the Kw factor) and wind erodibility groups are described under the heading “Physical Properties.”

Yields per Acre

The average yields per acre that can be expected of the principal crops under a high level of management are shown in table 6. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification of map units in the survey area also is shown in the table.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations also are considered (Olson and Lang, 2000; Olson and others, 2000).

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

Yields for grass-legume pasture also are shown in table 6. Pasture yields are expressed in terms of animal unit months. An animal unit month (AUM) is the amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

The estimated yields in the table reflect the productive capacity of each soil for each of the principal crops and pasture plants. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in table 6 are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for forestland or for engineering purposes.

In the capability system, soils are generally grouped at three levels—capability class, subclass, and unit (USDA, 1961).

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class 1 soils have slight limitations that restrict their use.

Class 2 soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.

Class 3 soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.

Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, *e, w, s,* or *c,* to the class numeral, for example, 2e. The letter *e* shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c,* used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by *w, s,* or *c* because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, forestland, or wildlife habitat.

Capability units are soil groups within a subclass. The soils in a capability unit are enough alike to be suited to the same crops and pasture plants, to require similar management, and to have similar productivity. Capability units are generally designated by adding an Arabic numeral to the subclass symbol, for example, 2e-4 and 3e-6. These units are not given in all soil surveys.

The capability classification of the soils in this survey area is given in the section “Detailed Soil Map Units” and in table 6.

Prime Farmland

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the Nation’s short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation’s prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

A recent trend in land use in Illinois has been the conversion of some prime farmland to urban and industrial uses. The loss of prime farmland to other uses puts pressure on lands that generally are less productive than prime farmland.

The map units in the survey area that are considered prime farmland are listed in table 7. This list does not constitute a recommendation for a particular land use. On some soils included in the list, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures. The extent of each listed map unit is shown in table 4. The location

is shown on the detailed soil maps. Some of the soil qualities that affect use and management are described under the heading “Detailed Soil Map Units.”

Hydric Soils

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in “Soil Taxonomy” (Soil Survey Staff, 1999) and “Keys to Soil Taxonomy” (Soil Survey Staff, 2006) and in the “Soil Survey Manual” (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in “Field Indicators of Hydric Soils in the United States” (Hurt and Vasilas, 2006).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. The depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

The map units in table 8 meet the definition of hydric soils and, in addition, have at least one of the hydric soil indicators. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and Vasilas, 2006).

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The map units in table 9, in general, do not meet the definition of hydric soils because they do not have one of the hydric soil indicators. A portion of these map units, however, may include hydric soils. Onsite investigation is recommended to determine whether hydric soils occur and the location of the included hydric soils.

The criteria for hydric soils are represented by codes in the tables (for example, 2B3). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
   A. are somewhat poorly drained and have a water table at the surface (0.0 feet) during the growing season, or
   B. are poorly drained or very poorly drained and have either:
      1) a water table at the surface (0.0 feet) during the growing season if textures are coarse sand, sand, or fine sand in all layers within a depth of 20 inches, or
      2) a water table at a depth of 0.5 foot or less during the growing season if saturated hydraulic conductivity (Ksat) is equal to or greater than 6.0 in/hr in all layers within a depth of 20 inches, or
      3) a water table at a depth of 1.0 foot or less during the growing season if saturated hydraulic conductivity (Ksat) is less than 6.0 in/hr in any layer within a depth of 20 inches.
3. Soils that are frequently ponded for long or very long duration during the growing season.
4. Soils that are frequently flooded for long or very long duration during the growing season.

Forestland Management and Productivity

The tables described in this section give interpretive ratings for various aspects of forestland management and provide information regarding the potential productivity of the soils for forestland.

Some rating class terms indicate the degree to which the soils are suited to a specified aspect of forestland management. *Well suited* indicates that the soil has features that are favorable for the specified management aspect and has no limitations. Good performance can be expected, and little or no maintenance is needed. *Moderately suited* indicates that the soil has features that are moderately favorable for the specified management aspect. One or more soil properties are less than desirable, and fair performance can be expected. Some maintenance is needed. *Poorly suited* indicates that the soil has one or more properties that are unfavorable for the specified management aspect. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. *Unsuited* indicates that the expected performance of the soil is unacceptable for the specified management aspect or that extreme measures are needed to overcome the undesirable soil properties.

The paragraphs that follow indicate the soil properties considered in rating the soils. More detailed information about the criteria used in the ratings is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet (http://soils.usda.gov/technical/).

Table 10a

For *limitations affecting construction of haul roads and log landings*, the ratings are based on slope, flooding, permafrost, plasticity index, the hazard of soil slippage, content of sand, the Unified classification, rock fragments on or below the surface, depth to a restrictive layer that is indurated, depth to a water table, and ponding. The limitations are described as slight, moderate, or severe. A rating of *slight* indicates that no significant limitations affect construction activities, *moderate* indicates that one or more limitations can cause some difficulty in construction, and *severe* indicates that one or more limitations can make construction very difficult or very costly.

The ratings of *suitability for log landings* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water

table, ponding, flooding, and the hazard of soil slippage. The soils are described as well suited, moderately suited, or poorly suited to use as log landings.

Ratings in the column *suitability for use of harvesting equipment* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, and ponding. The soils are described as well suited, moderately suited, or poorly suited to this use.

Table 10b

Ratings in the column *suitability for mechanized site preparation* are based on soil erodibility, soil texture, soil depth, drainage, water table duration, flooding, and the amount of cobbles, stones, or boulders on the surface. The soils are described as well suited, poorly suited, or unsuited to this management activity.

For *limitations affecting prescribed burning,* the ratings are based on slope, soil texture, drainage class, and rooting depth. The limitations are described as slight, moderate, or severe. Soils rated *slight* have few limitations that affect the reestablishment of vegetation. On soils rated *moderate,* post-burning practices are needed to achieve the desired results. Soils rated *severe* require post-burning practices designed for erosion control.

Table 10c

Ratings in the column *hazard of erosion on roads and trails* are based on soil erodibility, slope, and content of rock fragments. The ratings apply to unsurfaced roads and trails. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that little or no erosion is likely; *moderate* indicates that some erosion is likely, that the roads or trails may require occasional maintenance, and that simple erosion-control measures are needed; and *severe* indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that costly erosion-control measures are needed.

Ratings in the column *suitability for roads (natural surface)* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The ratings indicate the suitability for using the natural surface of the soil for roads. The soils are described as well suited, moderately suited, or poorly suited to this use.

Table 11

Information about the potential productivity of the soils in White County for forestland is provided in table 11. The most common tree species are white oak, northern red oak, eastern cottonwood, and pin oak. Site indices are listed for soils where the species are commonly grown. The site indices in this soil survey are from the University of Illinois (Olson and others, 2000).

The *potential productivity* of merchantable or *common trees* on a soil is expressed as a *site index.* The site index is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that woodland managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability.

Suggested trees to plant are those that are preferred for planting, seeding, or natural regeneration and those that remain in the stand after thinning or partial harvest.

Windbreaks and Environmental Plantings

Windbreaks protect livestock, buildings, yards, fruit trees, gardens, and cropland from wind and snow; help to keep snow on fields; and provide food and cover for wildlife. Field windbreaks are narrow plantings made at right angles to the prevailing

wind and at specific intervals across the field. The interval depends on the erodibility of the soil.

Environmental plantings help to beautify and screen houses and other buildings and to abate noise. The plants, mostly evergreen shrubs and trees, are closely spaced. To ensure plant survival, a healthy planting stock of suitable species should be planted properly on a well prepared site and maintained in good condition.

Table 12 shows the height that locally grown trees and shrubs are expected to reach in 20 years on soils in the survey area. The estimates in the table are based on measurements and observation of established plantings that have been given adequate care. They can be used as a guide in planning windbreaks and screens. Additional information on planning windbreaks and screens and planting and caring for trees and shrubs can be obtained from the local office of the Natural Resources Conservation Service or of the Cooperative Extension Service or from a commercial nursery.

Recreational Development

In tables 13a and 13b, the soils of the survey area are rated according to limitations that affect their suitability for recreational development. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in these tables can be supplemented by other information in this survey, for example, interpretations for dwellings without basements, for local roads and streets, and for septic tank absorption fields.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas. The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of

camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

Off-road motorcycle trails require little or no site preparation. They are not covered with surfacing material or vegetation. Considerable compaction of the soil material is likely. The ratings are based on the soil properties that influence erodibility, trafficability, dustiness, and the ease of revegetation. These properties are stoniness, slope, depth to a water table, ponding, flooding, and texture of the surface layer.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

Wildlife Habitat

White County provides a variety of habitat for wildlife, including forests, pastureland, extensive bottom-land areas, bluffs, and wetlands. The wildlife species in the survey area also are varied. They include populations of white-tailed deer, red-tailed hawks, bald eagles, wild turkey, snakes, gray squirrels, rabbits, bobwhite quail, and furbearers and many other nongame birds, mammals, amphibians, and reptiles. Wetland areas and streams support waterfowl, wading birds, shore birds, mink, muskrat, and a few river otters. Local conservation officials can assist in the selection of plants and the planning of wildlife habitat areas.

Soils affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the construction of water impoundments. The kind and abundance of wildlife depend largely on the amount and distribution of food, cover, and water. Wildlife habitat can be created or improved by planting appropriate vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

In table 14, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

The potential of the soil is rated good, fair, poor, or very poor. A rating of *good* indicates that the element or kind of habitat is easily established, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected. A rating of *fair* indicates that the element or kind of habitat can be established, improved, or maintained in most places. Moderately intensive management is required for satisfactory results. A rating of *poor* indicates that limitations are severe for the designated element or kind of habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and must be intensive. A rating of *very poor* indicates that restrictions for the element or kind of habitat are very severe and that unsatisfactory results can be expected. Creating, improving, or maintaining habitat is impractical or impossible.

The elements of wildlife habitat are described in the following paragraphs.

Grain and seed crops are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of grain and seed crops are corn, wheat, sorghum, and soybeans.

Grasses and legumes are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flooding, and slope. Soil temperature and soil moisture also are considerations. Examples of grasses and legumes are fescue, orchardgrass, bromegrass, clover, and alfalfa.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of wild herbaceous plants are bluestem, ragweed, beggarweed, broomsedge, and grama.

Hardwood trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness. Examples of these plants are oak, poplar, cherry, sweetgum, apple, hawthorn, dogwood, hickory, blackberry, and blueberry.

Coniferous plants furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are pine, spruce, fir, cedar, and juniper.

Wetland plants are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness, reaction,

salinity, slope, and surface stoniness. Examples of wetland plants are smartweed, wild millet, wildrice, cattail, cordgrass, rushes, sedges, and reeds.

Shallow water areas have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are marshes, waterfowl feeding areas, and ponds.

The habitat for various kinds of wildlife is described in the following paragraphs.

Habitat for openland wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife attracted to these areas include bobwhite quail, pheasant, meadowlark, field sparrow, cottontail, and red fox.

Habitat for woodland wildlife consists of areas of deciduous and/or coniferous plants and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, woodcock, thrushes, woodpeckers, squirrels, gray fox, raccoon, and deer.

Habitat for wetland wildlife consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, shore birds, muskrat, mink, and beaver.

Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, sanitary facilities, construction materials, and water management. The ratings are based on observed performance of the soils and on the data in the tables described under the heading “Soil Properties.”

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 to 7 feet of the surface, soil wetness, depth to a water table, ponding, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways,

pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, reclamation material, roadfill, and topsoil; plan structures for water management; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Tables 15a and 15b show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is

inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

Sanitary Facilities

Tables 16a and 16b show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the

soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

A *trench sanitary landfill* is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include permeability, depth to bedrock or a cemented pan, depth to a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The

surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

In an *area sanitary landfill*, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, depth to bedrock or a cemented pan, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

Construction Materials

Tables 17a and 17b give information about the soils as potential sources of gravel, sand, reclamation material, roadfill, and topsoil. Normal compaction, minor processing, and other standard construction practices are assumed.

Gravel and *sand* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In table 17a, only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand or gravel, the soil is considered a likely source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

The soils are rated *good, fair,* or *poor* as potential sources of sand and gravel. A rating of *good* or *fair* means that the source material is likely to be in or below the soil. The bottom layer and the thickest layer of the soils are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of sand or gravel. The number 0.00 indicates that the layer is a poor source. The number 1.00 indicates that

the layer is a good source. A number between 0.00 and 1.00 indicates the degree to which the layer is a likely source.

In table 17b, the rating class terms are *good, fair,* and *poor*. The features that limit the soils as sources of reclamation material, roadfill, and topsoil are specified in the table. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of these materials. The lower the number, the greater the limitation.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Water Management

Tables 18a and 18b give information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; aquifer-fed excavated ponds; grassed waterways and surface drains; terraces and diversions; and tile drains and underground outlets. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for

the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Table 18a

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. Embankments that have zoned construction (core and shell) are not considered. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects trafficability.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

Table 18b

Grassed waterways and surface drains are natural or constructed channels, generally broad and shallow, that conduct surface water to outlets at a nonerosive velocity. Large stones, wetness, slope, and depth to bedrock affect the construction of grassed waterways. A hazard of wind erosion, a low available water capacity, restricted rooting depth, toxic substances such as salts and sodium, and restricted permeability adversely affect the growth and maintenance of the grass after construction.

Terraces and diversions are embankments or a combination of channels and ridges constructed across a slope to control erosion and conserve moisture by intercepting runoff. Slope, wetness, large stones, and depth to bedrock affect the construction of terraces and diversions. A restricted rooting depth, a severe hazard of wind erosion or water erosion, an excessively coarse texture, and restricted permeability adversely affect maintenance.

Tile drains and underground outlets are used in some areas to remove excess subsurface and surface water from the soil. The ratings in the table apply to undisturbed soils that commonly have a seasonal high water table within a depth of about 3.5 feet. Current land use is not considered in the ratings. Depth to bedrock, a dense layer, or a cemented pan, the content of large stones, and the content of clay influence the ease of digging, filling, and compacting. A seasonal high water table, ponding, and flooding may restrict the period when excavations can be made. The slope influences the use of machinery. Soil texture and depth to the water table influence the resistance to sloughing. Subsidence of organic layers influences grade and stability of tile drains. Limitations affecting areas where the tile line passes through soils in which the water table is generally below a depth of 3.5 feet are provided in the table that includes the column “shallow excavations,” which is described under the heading “Building Site Development.”

Soil Properties

Data relating to soil properties are collected during the course of the soil survey.

Soil properties are ascertained by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine particle-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties are shown in tables. They include engineering index properties, physical and chemical properties, and pertinent soil and water features.

Engineering Index Properties

Table 19 gives the engineering classifications and the range of index properties for the layers of each soil in the survey area.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. “Loam,” for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, “gravelly.” Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement,

the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

The estimates of particle-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is generally omitted in the table.

Physical Properties

Table 20 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In the table, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In the table, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In the table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at

$^{1}/_{3}$- or $^{1}/_{10}$-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Permeability (Ksat) refers to the ability of a soil to transmit water or air. The term "permeability," as used in soil surveys, indicates saturated hydraulic conductivity (Ksat). The estimates in the table indicate the rate of water movement, in inches per hour, when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at $^{1}/_{3}$- or $^{1}/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In table 20, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops.

Erosion factors are shown in table 20 as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are described in the "National Soil Survey Handbook" (http://soils.usda.gov/technical/).

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Chemical Properties

Table 21 shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Cation-exchange capacity is the total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

Effective cation-exchange capacity refers to the sum of exchangeable cations plus aluminum expressed in terms of milliequivalents per 100 grams of soil. It is determined for soils that have pH of less than 5.5.

Soil reaction is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Calcium carbonate equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil. Incorporating nitrogen fertilizer into calcareous soils helps to prevent nitrite accumulation and ammonium-N volatilization.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In table 21, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops.

Sodium adsorption ratio (SAR) is a measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration. Soils that have SAR values of 13 or more may be characterized by an increased dispersion of organic matter and clay particles, reduced permeability and aeration, and a general degradation of soil structure.

Water Features

Table 22 gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Water table refers to a saturated zone in the soil. Table 22 indicates the depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone for the specified *months* in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

The table also shows the *kind of water table*, that is, apparent or perched. An *apparent* water table is a thick zone of free water in the soil. It is indicated by the level at which water stands in an uncased borehole after adequate time is allowed for adjustment in the surrounding soil. A *perched* water table is water standing above an unsaturated zone. In places an upper, or perched, water table is separated from a lower one by a dry zone.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. Table 22 indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* of flooding are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year). *Common* is used when the occasional and frequent classes are grouped for certain purposes.

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Soil Features

Table 23 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, fragipans, cemented layers, dense layers, and frozen layers. The table indicates the *hardness* of the restrictive layer, which significantly affects the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Subsidence is the settlement of organic soils or of saturated mineral soils of very low density. Subsidence generally results from either desiccation and shrinkage or oxidation of organic material, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. The table shows the expected initial subsidence, which usually is a result of drainage, and total subsidence, which results from a combination of factors.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based

mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low, moderate,* or *high,* is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low, moderate,* or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1999). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 24 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Alfisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Udalf (*Ud*, meaning humid, plus *alf*, from Alfisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Hapludalfs (*Hapl*, meaning minimal horizonation, plus *udalfs*, the suborder of the Alfisols that has a udic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Typic* identifies the subgroup that typifies the great group. An example is Typic Hapludalfs.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is coarse-loamy, mixed, superactive, mesic Typic Hapludalfs.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile.

Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for each

series. A pedon, a small three-dimensional area of soil, that is typical of the series in the survey area or in the MLRA is described. The detailed description of each soil horizon follows standards in the “Soil Survey Manual” (Soil Survey Division Staff, 1993). Many of the technical terms used in the descriptions are defined in “Soil Taxonomy” (Soil Survey Staff, 1999) and in “Keys to Soil Taxonomy” (Soil Survey Staff, 2003). Unless otherwise indicated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the series.

Alford Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Ultic Hapludalfs

Typical Pedon

Alford silt loam, on a gently sloping, convex, east-facing slope in a cultivated field at an elevation of about 560 feet above mean sea level; approximately 2,200 feet southwest of the north corner and then 1,200 feet southeast of the northwest boundary of Donation 162, T. 2 N., R. 9 W.; Knox County, Indiana; USGS Fritchton, Indiana-Illinois, topographic quadrangle; lat. 38 degrees 37 minutes 46 seconds N. and long. 87 degrees 26 minutes 06 seconds W.; UTM Zone 16, Easting 462146, Northing 4275764; NAD 83:

Ap—0 to 6 inches; brown (10YR 4/3) silt loam, light yellowish brown (10YR 6/4) dry; weak medium granular structure; friable; few fine roots; moderately acid; abrupt smooth boundary.

Bt1—6 to 9 inches; brown (7.5YR 5/4) silty clay loam; weak medium subangular blocky structure; friable; common distinct brown (7.5YR 4/4) clay films on faces of peds; few fine roots; very strongly acid; clear smooth boundary.

Bt2—9 to 22 inches; brown (7.5YR 4/4) silty clay loam; moderate medium subangular blocky structure; firm; few fine roots; many distinct reddish brown (5YR 4/4) clay films on faces of peds; very strongly acid; clear wavy boundary.

Bt3—22 to 32 inches; brown (7.5YR 4/4) silty clay loam; moderate coarse subangular blocky structure; firm; few fine roots; many distinct reddish brown (5YR 4/4) clay films on faces of peds; common medium prominent black (10YR 2/1) iron-manganese concretions; very strongly acid; clear wavy boundary.

Bt4—32 to 72 inches; brown (7.5YR 4/4) silt loam; weak coarse subangular blocky structure; friable; common distinct reddish brown (5YR 4/4) clay films on faces of peds; 1 percent sand; strongly acid; gradual wavy boundary.

2BC—72 to 80 inches; brown (7.5YR 4/4) silt loam; weak coarse subangular blocky structure; friable; 22 percent sand; moderately acid.

Range in Characteristics

Depth to the base of the argillic horizon: 44 to 80 inches
Particle-size control section: Averages 25 to 32 percent clay and 1 to 5 percent sand

Ap or A horizon:
Hue—10YR
Value—4
Chroma—2 or 3
Texture—silt loam; silty clay loam in some pedons in severely eroded areas
Reaction—very strongly acid or strongly acid in areas that have not been limed

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6

Texture—silt loam or silty clay loam
Reaction—very strongly acid or strongly acid

BC horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Texture—silt loam
Content of clay—12 to 22 percent
Content of sand—3 to 8 percent
Reaction—strongly acid to slightly acid

2BC horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Texture—silt loam
Content of clay—12 to 22 percent
Content of sand—15 to 30 percent
Reaction—strongly acid to slightly acid

Alvin Series

Taxonomic classification: Coarse-loamy, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Alvin fine sandy loam, on a terrace in a wooded area at an elevation of about 340 feet above mean sea level; 1,070 feet west of a north-south field lane and 20 feet south of the centerline of an east-west field lane in the SW1/4 SW1/4 NE1/4 SW1/4 of sec. 11, T. 14 S., R. 3 E.; Massac County, Illinois; USGS Mermet, Illinois, topographic quadrangle; lat. 37 degrees 18 minutes 37 seconds N. and long. 88 degrees 51 minutes 07 seconds W.; UTM Zone 16, Easting 335884, Northing 4130908; NAD 83:

A—0 to 2 inches; very dark grayish brown (10YR 3/2) fine sandy loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; very strongly acid; abrupt smooth boundary.

E—2 to 10 inches; dark yellowish brown (10YR 4/4) (80 percent) and yellowish brown (10YR 5/4) (20 percent) fine sandy loam; weak fine granular structure; friable; few fine black (N 2.5/) iron-manganese concretions; very strongly acid; clear smooth boundary.

BE—10 to 16 inches; dark yellowish brown (10YR 4/4) very fine sandy loam; weak medium subangular blocky structure; friable; strongly acid; clear smooth boundary.

Bt1—16 to 28 inches; brown (7.5YR 4/4) very fine sandy loam; moderate medium subangular blocky structure; friable; few faint reddish brown (5YR 4/4) clay films on faces of peds; very strongly acid; gradual smooth boundary.

Bt2—28 to 42 inches; brown (7.5YR 4/4) very fine sandy loam; weak medium subangular blocky structure; friable; few faint reddish brown (5YR 4/4) clay films on faces of peds; very strongly acid; gradual smooth boundary.

BC—42 to 58 inches; brown (7.5YR 4/4) loamy fine sand; weak coarse subangular blocky structure; friable; very strongly acid; clear smooth boundary.

C—58 to 80 inches; brown (7.5YR 4/4) loamy fine sand; massive; friable; strongly acid.

Range in Characteristics

Depth to the base of the argillic horizon: 40 to more than 80 inches

Ap or A horizon:
Hue—10YR
Value—3 or 4
Chroma—1 to 4
Texture—very fine sandy loam, fine sandy loam, or sandy loam; less commonly loamy sand or loamy fine sand
Reaction—very strongly acid to neutral

E, EB, or BE horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—2 to 4
Texture—very fine sandy loam, fine sandy loam, sandy loam, or loamy fine sand
Reaction—very strongly acid to neutral

Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—very fine sandy loam, fine sandy loam, loam, or sandy loam; thin layers of sandy clay loam
Reaction—very strongly acid to neutral

BC or C horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—fine sandy loam, loamy fine sand, very fine sand, or fine sand
Reaction—very strongly acid to moderately alkaline

Ambraw Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Fluvaquentic Endoaquolls

Typical Pedon

Ambraw clay loam, in a cultivated field on a flood plain at an elevation of about 448 feet above mean sea level; 2,550 feet south and 285 feet east of the northwest corner of sec. 15, T. 9 N., R. 11 W.; Clark County, Illinois; USGS West Union, Illinois, topographic quadrangle; lat. 39 degrees 13 minutes 23 seconds N. and long. 87 degrees 37 minutes 39 seconds W.; UTM Zone 16, Easting 445832, Northing 4341722; NAD 83:

Ap—0 to 8 inches; very dark grayish brown (10YR 3/2) clay loam, grayish brown (10YR 5/2) dry; weak medium granular structure; firm; many fine roots; slightly acid; abrupt smooth boundary.
A—8 to 14 inches; very dark gray (10YR 3/1) clay loam, gray (10YR 5/1) dry; weak coarse subangular blocky structure; firm; many fine roots; slightly acid; abrupt smooth boundary.
Bg1—14 to 18 inches; dark gray (10YR 4/1) clay loam; weak fine and medium subangular blocky structure; firm; many fine roots; common fine distinct brown (10YR 4/3) and dark brown (10YR 3/3) extremely weakly cemented iron-manganese accumulations in the matrix; moderately acid; clear smooth boundary.
Bg2—18 to 27 inches; dark gray (10YR 4/1) clay loam; moderate fine and medium prismatic structure parting to weak and moderate medium subangular blocky; firm; common fine and very fine roots; few faint very dark gray (10YR 3/1) organic

stains on faces of peds; few medium faint spherical black (7.5YR 2.5/1) weakly cemented iron-manganese concretions throughout; common fine faint dark brown (7.5YR 3/2) manganese masses in the matrix; common fine prominent brown (7.5YR 4/4) masses of oxidized iron and manganese in the matrix; moderately acid; gradual smooth boundary.

Bg3—27 to 37 inches; dark gray (N 4/) clay loam; moderate fine and medium prismatic structure parting to weak medium subangular blocky; firm; few very fine roots; few faint very dark gray (10YR 3/1) organic stains on faces of peds; common fine and medium prominent brown (10YR 5/3), yellowish brown (10YR 5/8), and strong brown (7.5YR 5/8) masses of oxidized iron in the matrix; moderately acid; gradual smooth boundary.

BCg—37 to 45 inches; dark gray (N 4/) sandy clay loam with thin strata of loam and sandy loam; weak coarse angular blocky structure; firm; many medium prominent dark brown (7.5YR 3/2) manganese masses in the matrix; many medium prominent strong brown (7.5YR 4/6) masses of oxidized iron in the matrix; slightly acid; gradual wavy boundary.

Cg—45 to 60 inches; dark gray (N 4/) sandy clay loam with pockets and layers of clay loam and silty clay loam; massive; friable; common medium prominent spherical black (7.5YR 2.5/1) iron-manganese concretions throughout; few fine prominent strong brown (7.5YR 5/6) and many medium prominent dark yellowish brown (10YR 3/4) and brown (7.5YR 4/4) masses of oxidized iron in the matrix; slightly acid.

Range in Characteristics

Depth to carbonates: More than 50 inches

Ap or A horizon:
Hue—10YR
Value—2 to 3
Chroma—1 or 2
Texture—clay loam, silty clay loam, sandy loam, sandy clay loam, or loam
Reaction—moderately acid to neutral

Bg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—3 to 6
Chroma—0 to 2
Texture—clay loam or loam
Reaction—strongly acid to neutral

BCg or Cg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—4 or 5
Chroma—0 to 2
Texture—commonly sandy clay loam or clay loam stratified with loam, sandy loam, silt loam, loamy sand, or sand
Reaction—slightly acid to moderately alkaline

Armiesburg Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Fluventic Hapludolls

Typical Pedon

Armiesburg silty clay loam, on a flood plain in a cultivated field at an elevation of about 325 feet above mean sea level; approximately 360 feet north of an east-west gravel road and 310 feet east of the center of a north-south gravel road in the NE$^1/_4$ SW$^1/_4$

NE1/4 SW1/4 of sec. 28, T. 16 S., R. 6 E.; Massac County, Illinois; USGS Paducah East, Illinois, topographic quadrangle; lat. 37 degrees 05 minutes 27 seconds N. and long. 88 degrees 33 minutes 35 seconds W.; UTM Zone 16, Easting 361383, Northing 4106087; NAD 83:

Ap—0 to 6 inches; very dark grayish brown (10YR 3/2) silty clay loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; neutral; abrupt smooth boundary.

A—6 to 15 inches; dark brown (10YR 3/3) silty clay loam, brown (10YR 5/3) dry; weak coarse subangular blocky structure; firm; many worm channels; slightly alkaline; gradual smooth boundary.

BA—15 to 30 inches; brown (10YR 4/3) silty clay loam; weak very coarse to medium subangular blocky structure; firm; common distinct dark grayish brown (10YR 4/2) organic coatings on faces of peds; few distinct very dark brown (10YR 2/2) and very dark grayish brown (10YR 3/2) clay bridges in root channels; slightly alkaline; diffuse smooth boundary.

Bw1—30 to 42 inches; dark yellowish brown (10YR 4/4) silty clay loam that contains few sand grains; weak coarse to fine subangular blocky structure; firm; fine pores; few distinct dark grayish brown (10YR 4/2) organic coatings on faces of peds; few fine prominent black (N 2.5/) iron-manganese concretions; few fine shiny particles, possibly mica; slightly alkaline; diffuse smooth boundary.

Bw2—42 to 67 inches; dark yellowish brown (10YR 4/4) silty clay loam that contains some fine sand; weak medium and fine subangular blocky structure; firm; fine pores in peds; few distinct dark grayish brown (10YR 4/2) worm casts and organoargillans in worm channels; fine shiny grains, possibly mica; few fine prominent black (N 2.5/) iron-manganese concretions; slightly alkaline; gradual wavy boundary.

C—67 to 80 inches; dark yellowish brown (10YR 4/4) silt loam that contains some very fine sand; massive; friable; few distinct dark grayish brown (10YR 4/2) worm casts and organoargillans in worm channels; few fine prominent black (N 2.5/) iron-manganese concretions; more shiny particles (possibly mica) than in the horizons above; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches
Depth to the base of the cambic horizon: More than 38 inches

Ap or A horizon:
Hue—10YR
Value—2 to 3
Chroma—1 to 3
Texture—silt loam or silty clay loam

BA horizon (if it occurs):
Hue—10YR
Value—3 to 5
Chroma—3 or 4
Texture—silt loam or silty clay loam

Bw horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam or silty clay loam; clay loam in the lower part

C horizon:
Hue—10YR

Value—3 to 5
Chroma—3 or 4
Texture—silt loam, silty clay loam, or loam

Ava Series

Taxonomic classification: Fine-silty, mixed, active, mesic Oxyaquic Fragiudalfs

Typical Pedon

Ava silt loam, on a convex slope of 3 percent in a pasture at an elevation of about 440 feet above mean sea level; about 925 feet south and 1,575 feet west of the northeast corner of sec. 17, T. 1 N., R. 10 E.; Edwards County, Illinois; USGS West Salem, Illinois, topographic quadrangle; lat. 38 degrees 31 minutes 24 seconds N. and long. 88 degrees 07 minutes 05 seconds W.; UTM Zone 16, Easting 402959, Northing 4263623; NAD 83:

Ap—0 to 6 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; moderate fine granular structure; friable; many fine roots; slightly acid; abrupt smooth boundary.

E—6 to 10 inches; brown (10YR 4/3) silt loam; weak medium platy structure; friable; few fine roots; strongly acid; clear smooth boundary.

BE—10 to 14 inches; yellowish brown (10YR 5/6) silt loam; moderate fine and medium subangular blocky structure; friable; common fine roots; strongly acid; clear smooth boundary.

Bt—14 to 24 inches; yellowish brown (10YR 5/4) silty clay loam; strong fine and medium subangular blocky structure; firm; few fine roots; very few distinct brown (7.5YR 5/4) clay films and light yellowish brown (10YR 6/4) silt coatings on faces of peds; very strongly acid; clear smooth boundary.

Bt/E—24 to 27 inches; yellowish brown (10YR 5/4) silty clay loam (Bt) and light yellowish brown (10YR 6/4) silt (E), light gray (10YR 7/2) dry; the E material occurs as common distinct silt coatings on faces of peds and as fillings in spaces between peds; moderate fine and medium subangular blocky structure; firm; few fine roots; common medium distinct brown (7.5YR 4/4) masses of oxidized iron; few fine distinct black (10YR 2/1) iron-manganese concretions; very strongly acid; clear smooth boundary.

B´t—27 to 34 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; firm; few fine roots; common distinct brown (10YR 4/3) clay films and few distinct light gray (10YR 7/2) silt coatings on faces of peds; common fine distinct grayish brown (10YR 5/2) iron depletions and few fine distinct yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; very strongly acid; gradual smooth boundary.

2Btx1—34 to 44 inches; grayish brown (10YR 5/2) silty clay loam; moderate very coarse prismatic structure parting to weak coarse subangular blocky; very firm; cracks between polygons filled with light gray (10YR 7/1) silt loam; common coarse prominent yellowish brown (10YR 5/8) masses of oxidized iron in the matrix; common coarse prominent dark red (2.5YR 3/6) and distinct brown (7.5YR 4/4) weakly cemented iron-manganese nodules and few fine distinct black (10YR 2/1) iron-manganese concretions; about 12 percent sand; brittle; very strongly acid; gradual smooth boundary.

2Btx2—44 to 50 inches; brown (10YR 5/3) loam; weak very coarse prismatic structure parting to weak coarse subangular blocky; very firm; few vertical streaks and cracks between polygons filled with light gray (10YR 7/1) silt; common coarse faint dark yellowish brown (10YR 4/4) masses of oxidized iron and common fine faint grayish brown (10YR 5/2) iron depletions in the matrix; few black (10YR 2/1) iron-

manganese concretions; about 30 percent sand; brittle; very strongly acid; gradual smooth boundary.

3Btb—50 to 80 inches; brown (10YR 5/3) loam; weak coarse prismatic structure; firm; common faint brown (10YR 4/3) clay films on faces of peds; common medium faint grayish brown (10YR 5/2) iron depletions in the matrix; strongly acid.

Range in Characteristics

Depth to the second sequum (Bt/E or B´t horizon): 20 to 30 inches
Depth to the fragipan: 25 to 40 inches
Thickness of the Peoria Loess: 30 to 55 inches
Particle-size control section: Averages 24 to 35 percent clay
Other characteristics: The E horizon has been mixed with the surface layer in some pedons in eroded areas.

Ap horizon:
Hue—10YR
Value—4 or 5 (6 or 7 dry)
Chroma—2 or 3
Texture—silt loam; silty clay loam in some pedons in eroded areas
Reaction—very strongly acid or strongly acid, except in areas that have been limed

E or EB horizon (if it occurs):
Hue—10YR
Value—4 or 5
Chroma—3 to 6
Reaction—very strongly acid or strongly acid, except in areas that have been limed

Bt and B´t horizons:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—silty clay loam or silt loam
Reaction—strongly acid or very strongly acid

Bt/E horizon (Bt part):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—silty clay loam or silt loam
Reaction—strongly acid or very strongly acid

Bt/E horizon (E part):
Hue—10YR
Value—5 to 8
Chroma—1 to 4
Texture—silt loam or silt
Reaction—strongly acid or very strongly acid

Btx or 2Btx horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—2 to 8
Texture—silt loam, silty clay loam, or loam
Content of rock fragments—0 to 4 percent
Reaction—strongly acid or very strongly acid

2Btb or 3Btb horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—2 to 6
Texture—loam, silt loam, clay loam, or silty clay loam
Content of rock fragments—0 to 10 percent
Reaction—strongly acid or very strongly acid

Banlic Series

Taxonomic classification: Coarse-silty, mixed, active, acid, mesic Fragic Epiaquepts
Taxadjunct features: The Banlic soils in this survey area have higher chroma in the upper part of the subsoil than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soils. These soils are classified as coarse-silty, mixed, active, mesic Fragiaquic Dystrudepts.

Typical Pedon

Banlic silt loam, on a nearly level step of a flood plain in an idle field at an elevation of about 395 feet above mean sea level; about 226 feet north and 484 feet west of the center of sec. 31, T. 5 S., R. 2 W.; Perry County, Illinois; USGS Pyatts, Illinois, topographic quadrangle; lat. 38 degrees 02 minutes 50 seconds N. and long. 89 degrees 21 minutes 50 seconds W.; UTM Zone 16, Easting 292567, Northing 4213696; NAD 83:

Ap—0 to 5 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; weak fine and medium granular structure; friable; few very fine and fine roots; few fine iron-manganese concretions; slightly alkaline; abrupt smooth boundary.

A—5 to 8 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak fine and medium subangular blocky structure; friable; few very fine and fine roots; many fine faint dark yellowish brown (10YR 4/4) masses of oxidized iron in the matrix; few fine iron-manganese concretions; neutral; abrupt smooth boundary.

E—8 to 13 inches; brown (10YR 5/3) silt loam, very pale brown (10YR 7/3) dry; weak fine and medium subangular blocky structure; friable; few very fine roots; common medium distinct yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; few fine iron-manganese concretions; very strongly acid; clear smooth boundary.

Bw—13 to 21 inches; pale brown (10YR 6/3) silt loam; weak medium subangular blocky structure; friable; few very fine roots; common fine faint light brownish gray (10YR 6/2) iron depletions and common fine distinct yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; few fine iron-manganese concretions; very strongly acid; clear smooth boundary.

Bx1—21 to 27 inches; brown (10YR 5/3) silt loam; moderate medium subangular blocky structure; firm; few very fine roots; common prominent white (10YR 8/1) (dry) clay depletions on faces of peds; common fine faint light brownish gray (10YR 6/2) iron depletions and common medium distinct yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; common fine iron-manganese concretions; brittle; very strongly acid; clear smooth boundary.

Bx2—27 to 38 inches; brown (10YR 5/3) silt loam; moderate medium prismatic structure parting to weak medium subangular blocky; firm; few very fine roots; common prominent white (10YR 8/1) (dry) silt coatings on faces of peds; common medium faint light brownish gray (10YR 6/2) iron depletions and common medium distinct yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; common fine iron-manganese concretions; brittle; very strongly acid; clear smooth boundary.

BCg—38 to 55 inches; light brownish gray (10YR 6/2) silt loam; weak coarse subangular blocky structure; friable; few very fine roots; few distinct white (10YR 8/1) (dry) silt coatings on faces of peds; common medium distinct yellowish brown (10YR 5/4) masses of oxidized iron in the matrix; common medium iron-manganese concretions; very strongly acid; gradual smooth boundary.

Cg—55 to 80 inches; variegated 50 percent light brownish gray (10YR 6/2) and 50 percent yellowish brown (10YR 5/4) silt loam; massive; friable; common fine distinct yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; many fine iron-manganese concretions; slightly acid.

Range in Characteristics

Depth to fragic soil properties: 15 to 36 inches
Depth to the base of soil development: 45 to 65 inches
Particle-size control section: Averages 12 to 18 percent clay and less than 15 percent sand

Ap or A horizon:
Hue—10YR
Value—3 to 5 (6 or 7 dry)
Chroma—2 or 3
Texture—silt loam or silt
Reaction—strongly acid to slightly alkaline, depending upon liming practices

E horizon:
Hue—10YR
Value—4 to 6 (6 to 8 dry)
Chroma—2 or 3
Texture—silt loam
Reaction—very strongly acid or strongly acid; ranges to neutral in areas that have been limed

Bg or Bw horizon:
Hue—10YR
Value—5 or 6
Chroma—2 or 3
Texture—silt loam
Reaction—very strongly acid or strongly acid

Bx horizon:
Hue—10YR or 2.5Y
Value—5 to 7
Chroma—1 to 4
Texture—silt loam or silt
Reaction—very strongly acid or strongly acid

BCg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 4
Texture—silt loam or silt
Reaction—very strongly acid or strongly acid

Cg or C horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 4

Texture—silt loam
Reaction—very strongly acid to slightly acid

Belknap Series

Taxonomic classification: Coarse-silty, mixed, active, acid, mesic Fluvaquentic Endoaquepts

Typical Pedon

Belknap silt loam, on a flood plain in a cultivated field at an elevation of about 430 feet above mean sea level; approximately 350 feet north of the center of the road on the west side of the stream; 1,000 feet east and 1,000 feet north of the center of sec. 33, T. 2 N., R. 12 W.; Wabash County, Illinois; USGS Saint Francisville, Illinois-Indiana, topographic quadrangle; lat. 38 degrees 33 minutes 52 seconds N. and long. 87 degrees 44 minutes 50.5 seconds W.; UTM Zone 16, Easting 434889, Northing 4268709; NAD 83:

Ap—0 to 7 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; weak fine and medium granular structure; friable; strongly acid; abrupt smooth boundary.

A—7 to 13 inches; dark grayish brown (10YR 4/2) silt loam; weak thin platy structure parting to weak fine granular; friable; slightly compact as a plowpan; few medium faint brown (10YR 5/3) and few fine prominent yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; strongly acid; gradual smooth boundary.

Bg—13 to 27 inches; dark grayish brown (10YR 4/2), grayish brown (10YR 5/2), and brown (10YR 5/3) silt loam; weak medium granular structure with a tendency toward subangular blocky; friable; few medium faint light brownish gray (10YR 6/2) iron depletions and common fine distinct yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; few iron-manganese concretions; strongly acid; gradual smooth boundary.

Cg1—27 to 59 inches; light brownish gray (10YR 6/2) silt loam; massive; friable; common fine prominent dark reddish brown (2.5YR 3/4) and yellowish brown (10YR 5/8) masses of oxidized iron in the matrix; many iron-manganese concretions, increasing in number and size with increasing depth; strongly acid; gradual smooth boundary.

Cg2—59 to 80 inches; dark gray (10YR 4/1) silt loam; massive; friable; common medium faint gray (10YR 6/1) iron depletions and few medium prominent brown (7.5YR 5/4) masses of oxidized iron in the matrix; many iron-manganese concretions; moderately acid.

Range in Characteristics

Depth to the base of the cambic horizon: Typically 12 to 40 inches; ranges to 60 inches
Reaction: Strongly acid or very strongly acid in the particle-size control section

Ap or A horizon:
Hue—10YR
Value—4 to 6 (6 or 7 dry); 3 in some pedons in uncultivated areas
Chroma—2 or 3
Texture—silt loam
Reaction—very strongly acid to moderately acid, except in areas that have been limed

Bg or Bw horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 4

Texture—silt loam to a depth of at least 40 inches; strata of loam or silty clay loam below a depth of 40 inches in some pedons

Cg or C horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 4
Texture—silt loam or silt to a depth of at least 40 inches; strata of loam or silty clay loam below a depth of 40 inches in some pedons

Berks Series

Taxonomic classification: Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Typical Pedon

Berks channery loam, in a steep or very steep wooded area at an elevation of about 578 feet above mean sea level; approximately 943 feet west and 1,104 feet north of the southeast corner of sec. 7, T. 14 S., R. 4 E.; Massac County, Illinois; USGS Mermet, Illinois, topographic quadrangle; lat. 37 degrees 18 minutes 44 seconds N. and long. 88 degrees 48 minutes 20 seconds W.; UTM Zone 16, Easting 339994, Northing 4131045; NAD 83:

A1—0 to 2 inches; very dark grayish brown (10YR 3/2) channery loam, brown (10YR 5/3) dry; moderate fine granular structure; friable; many roots; about 35 percent sandstone fragments; moderately acid; abrupt smooth boundary.
A2—2 to 4 inches; brown (10YR 4/3) very channery loam, pale brown (10YR 6/3) dry; weak fine granular structure; friable; many roots; about 50 percent sandstone fragments; moderately acid; abrupt smooth boundary.
Bw—4 to 20 inches; dark yellowish brown (10YR 4/4) extremely channery loam; weak fine subangular blocky structure; friable; many roots; about 66 percent sandstone fragments; very strongly acid; gradual smooth boundary.
C—20 to 28 inches; strong brown (7.5YR 5/6) extremely channery loam; massive; friable; common roots; about 75 percent sandstone fragments; very strongly acid; clear smooth boundary.
R—28 inches; sandstone bedrock.

Range in Characteristics

Depth to the top of the cambic horizon: 3 to 12 inches
Depth to the base of the cambic horizon: 12 to 40 inches
Depth to bedrock: 20 to 40 inches
Reaction: Extremely acid to slightly acid

A horizon:
Hue—10YR
Value—3 to 5
Chroma—2 to 4
Texture of the fine-earth fraction—loam or silt loam
Content of rock fragments—10 to 50 percent

Bw horizon:
Hue—5YR, 7.5YR, 10YR, or 2.5Y
Value—4 to 6
Chroma—3 to 8
Texture of the fine-earth fraction—loam, silt loam, or silty clay loam
Content of rock fragments—15 to 75 percent

C horizon:
Hue—5YR, 7.5YR, 10YR, or 2.5Y
Value—4 to 6
Chroma—2 to 8
Texture of the fine-earth fraction—loam or silt loam
Content of rock fragments—35 to 90 percent

R layer:
Kind of bedrock—shale, siltstone, or sandstone

Bloomfield Series

Taxonomic classification: Sandy, mixed, mesic Lamellic Hapludalfs

Typical Pedon

Bloomfield fine sand, on a slope of 6 percent on a terrace along the Embarras River at an elevation of about 448 feet above mean sea level; 600 feet south and 200 feet west of the northeast corner of sec. 4, T. 3 N., R. 11 W.; Lawrence County, Illinois; USGS Lawrenceville, Illinois, topographic quadrangle; lat. 38 degrees 43 minutes 52 seconds N. and long. 87 degrees 37 minutes 59 seconds W.; UTM Zone 16, Easting 444973, Northing 4287134; NAD 83:

A—0 to 5 inches; dark grayish brown (10YR 4/2) fine sand, light brownish gray (10YR 6/2) dry; weak fine granular structure; very friable; slightly acid; clear smooth boundary.

E1—5 to 24 inches; brown (10YR 4/3) fine sand; single grain; loose; moderately acid; gradual wavy boundary.

E2—24 to 38 inches; yellowish brown (10YR 5/6) fine sand; single grain; loose; moderately acid; clear smooth boundary.

E and Bt1—38 to 58 inches; yellowish brown (10YR 5/4) fine sand; single grain; loose (E); many wavy and discontinuous brown (7.5YR 4/4) loamy fine sand lamellae and bands of Bt material, about 1/8 inch in thickness in the upper part and 1/8 inch to 6 inches in thickness in the lower part; weak coarse subangular blocky structure; friable; moderately acid; gradual wavy boundary.

E and Bt2—58 to 80 inches; yellowish brown (10YR 5/4) fine sand; single grain; loose (E); brown (7.5YR 4/4) loamy fine sand (Bt); weak coarse subangular blocky structure; friable; bands are nearly continuous and are 4 to 8 inches in thickness; moderately acid.

Range in Characteristics

Combined thickness of the lamellae above a depth of 60 inches: More than 6 inches
Other features: The argillic horizon occurs as lamellae and banded layers up to 8 inches in thickness.

Ap or A horizon:
Hue—10YR
Value—3 or 4
Chroma—2 to 4
Texture—fine sand, loamy fine sand, sand, or loamy sand
Reaction—slightly acid to strongly acid; ranges to neutral in areas that have been limed

E horizon:
Hue—10YR
Value—4 to 6
Chroma—3 to 6

Texture—fine sand, loamy fine sand, sand, or loamy sand
Reaction—strongly acid to neutral

E and Bt horizon (E part):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—fine sand, loamy fine sand, loamy sand, or sand
Reaction—strongly acid to slightly alkaline
Other characteristics—occurs as interband material and typically is single grain and loose

E and Bt horizon (Bt part):
Hue—5YR, 7.5YR, or 10YR
Value—3 to 5
Chroma—3 to 6
Texture—loamy fine sand, loamy sand, or fine sand; less commonly sand
Reaction—strongly acid to slightly alkaline

C horizon (if it occurs):
Hue—10YR
Value—4 to 7
Chroma—2 to 6
Texture—loamy fine sand, loamy sand, fine sand, or sand
Calcium carbonate equivalent—0 to 20 percent

Bluford Series

Taxonomic classification: Fine, smectitic, mesic Aeric Fragic Epiaqualfs

Typical Pedon

Bluford silt loam, on a southwest-facing slope of 2 percent in a cultivated field at an elevation of about 549 feet above mean sea level; 1,585 feet south and 925 feet west of the northeast corner of sec. 16, T. 8 N., R. 13 W.; Crawford County, Illinois; USGS Annapolis, Illinois, topographic quadrangle; lat. 39 degrees 08 minutes 22.7 seconds N. and long. 87 degrees 51 minutes 27.9 seconds W.; UTM Zone 16, Easting 425872, Northing 4332623; NAD 83:

Ap—0 to 7 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; moderate medium granular structure; very friable; few very fine roots; few fine spherical weakly cemented manganese nodules throughout; neutral; abrupt smooth boundary.

E1—7 to 15 inches; light brownish gray (10YR 6/2) silt loam, white (2.5Y 8/1) dry; moderate medium platy structure; very friable; few very fine roots; many medium distinct yellowish brown (10YR 5/4) and few medium faint brown (10YR 5/3) masses of oxidized iron in the matrix; common fine spherical weakly cemented iron-manganese nodules throughout; very strongly acid; clear smooth boundary.

E2—15 to 20 inches; pale brown (10YR 6/3) silt loam, pale yellow (2.5Y 8/2) dry; moderate medium platy structure parting to moderate very fine subangular blocky; very friable; few very fine roots; common prominent white (10YR 8/1) (dry) silt coatings on faces of peds; common medium faint grayish brown (10YR 5/2) iron depletions in the matrix; very strongly acid; clear smooth boundary.

Btg—20 to 35 inches; grayish brown (10YR 5/2) silty clay; moderate medium subangular blocky structure; firm; few very fine roots; common faint grayish brown (10YR 5/2) clay films on faces of peds; common medium faint gray (10YR 5/1) iron depletions in the matrix; common medium distinct dark yellowish brown (10YR

4/4) and many medium prominent yellowish brown (10YR 5/6) extremely weakly cemented iron-manganese accumulations in the matrix; common fine prominent strong brown (7.5YR 5/6) masses of oxidized iron on faces of peds and in pores; few fine spherical weakly cemented iron-manganese nodules throughout; very strongly acid; clear smooth boundary.

2Btgx—35 to 42 inches; grayish brown (10YR 5/2) silty clay loam; moderate coarse prismatic structure; firm; few faint grayish brown (10YR 5/2) clay films and common prominent white (10YR 8/1) silt coatings on faces of peds; few fine faint gray (10YR 6/1) iron depletions and common medium distinct dark yellowish brown (10YR 4/4) extremely weakly cemented iron-manganese accumulations in the matrix; common fine prominent strong brown (7.5YR 5/6) masses of oxidized iron on faces of peds and in pores; few fine spherical weakly cemented iron-manganese nodules throughout; brittle; very strongly acid; gradual smooth boundary.

2Btg—42 to 60 inches; gray (10YR 5/1) silty clay loam; weak coarse prismatic structure; very firm; few faint dark gray (10YR 4/1) clay films in root channels; common medium distinct yellowish brown (10YR 5/4) and common medium prominent yellowish brown (10YR 5/6) extremely weakly cemented iron-manganese accumulations in the matrix; common fine spherical weakly cemented iron-manganese nodules throughout; about 1 percent gravel; very strongly acid.

Range in Characteristics

Depth to fragic soil properties: 24 to 48 inches
Thickness of the Peoria Loess: 30 to 55 inches
Particle-size control section: Averages 35 to 42 percent clay and less than 8 percent sand
Other characteristics: Some pedons have a BE horizon.

Ap or A horizon:
Hue—10YR
Value—3 to 5
Chroma—1 to 3
Texture—silt loam
Reaction—very strongly acid or strongly acid; ranges to neutral in areas that have been limed

E horizon:
Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—silt loam
Reaction—very strongly acid to neutral

Bt and/or Btg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 3
Texture—silty clay loam or silty clay
Reaction—very strongly acid to slightly acid

2Btgx horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6
Chroma—1 to 8
Texture—silt loam, loam, silty clay loam, or clay loam
Reaction—very strongly acid to moderately acid

2Btg or 2BCg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 6
Texture—silty clay loam, silt loam, or loam
Content of rock fragments—0 to 5 percent
Reaction—very strongly acid to moderately acid

3Agb or 3Btgb horizon (if it occurs):
Hue—7.5YR, 10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 or 2
Texture—silty clay loam, clay loam, silt loam, or loam
Content of rock fragments—0 to 5 percent
Reaction—moderately acid to slightly alkaline

Bonnie Series

Taxonomic classification: Fine-silty, mixed, active, acid, mesic Typic Fluvaquents

Typical Pedon

Bonnie silt loam, in a cultivated field on a flood plain at an elevation of about 419 feet above mean sea level; 2,660 feet north and 1,920 feet east of the southwest corner of sec. 21, T. 5 S., R. 4 E.; Franklin County, Illinois; USGS Ewing, Illinois, topographic quadrangle; lat. 38 degrees 04 minutes 32 seconds N. and long. 88 degrees 46 minutes 17 seconds W.; UTM Zone 16, Easting 344630, Northing 4215680; NAD 83:

Ap1—0 to 5 inches; brown (10YR 5/3) silt loam; weak fine granular structure; friable; common fine and medium roots throughout; common fine spherical extremely weakly cemented iron-manganese accumulations; slightly acid; abrupt smooth boundary.

Ap2—5 to 10 inches; light brownish gray (10YR 6/2) and dark grayish brown (10YR 4/2) silt loam; weak medium angular blocky structure parting to weak medium platy; friable; common fine and medium roots throughout; common fine and medium faint brown (10YR 4/3) masses of oxidized iron and manganese; common fine spherical masses of oxidized iron; moderately acid; abrupt smooth boundary.

Cg1—10 to 27 inches; gray (10YR 6/1) and light gray (10YR 7/1) silt loam; massive; friable; few very fine roots throughout; common fine and medium prominent yellowish brown (10YR 5/4 and 5/6) masses of oxidized iron and common medium faint grayish brown (10YR 5/2) iron depletions; common fine spherical extremely weakly cemented iron-manganese accumulations; very strongly acid; clear smooth boundary.

Cg2—27 to 80 inches; gray (10YR 6/1) silt loam; massive; friable; common fine and medium prominent yellowish brown (10YR 5/4 and 5/6) masses of oxidized iron; common fine spherical extremely weakly cemented iron-manganese accumulations; very strongly acid.

Range in Characteristics

Particle-size control section: Averages 18 to 27 percent clay and less than 10 percent sand

Reaction: Strongly acid or very strongly acid from a depth of 10 to 40 inches and very strongly acid to slightly alkaline below a depth of 40 inches

A or Ap horizon:
Hue—10YR or 2.5Y
Value—4 to 6

Chroma—1 to 3
Texture—silt loam

Cg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—5 to 7
Chroma—0 to 2
Texture—commonly silt loam; less commonly silty clay loam (below a depth of 40 inches)

Cisne Series

Taxonomic classification: Fine, smectitic, mesic Mollic Albaqualfs

Typical Pedon

Cisne silt loam, in a nearly level area in a cultivated field at an elevation of about 556 feet above mean sea level; 1,960 feet west and 420 feet south of the northeast corner of sec. 3, T. 6 N., R. 9 E.; Jasper County, Illinois; USGS Newton, Illinois, topographic quadrangle; lat. 38 degrees 59 minutes 36.6 seconds N. and long. 88 degrees 11 minutes 42.9 seconds W.; UTM Zone 16, Easting 396490, Northing 4316734; NAD 83:

Ap—0 to 8 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; few very dark gray (10YR 3/1) organic stains on faces of peds; few fine and medium faint black (10YR 2/1) weakly cemented iron-manganese nodules throughout; moderately acid; abrupt smooth boundary.

Eg1—8 to 13 inches; grayish brown (10YR 5/2) silt loam, light gray (10YR 7/2) dry; moderate medium platy structure; friable; common fine prominent yellowish brown (10YR 5/8) masses of oxidized iron in the matrix; common fine and medium distinct black (10YR 2/1) weakly cemented iron-manganese nodules throughout; strongly acid; clear smooth boundary.

Eg2—13 to 17 inches; light gray (10YR 7/2) and light brownish gray (10YR 6/2) silt loam, very pale brown (10YR 8/2) dry; moderate medium platy structure; friable; common fine and medium prominent black (10YR 2/1) weakly cemented iron-manganese nodules throughout; strongly acid; abrupt smooth boundary.

B/E—17 to 19 inches; gray (10YR 6/1) silty clay loam (B); moderate fine angular blocky structure; friable; common prominent light gray (10YR 7/1) silt coatings on faces of peds (E); common medium prominent yellowish red (5YR 4/6) masses of oxidized iron in the matrix; common fine and medium prominent black (10YR 2/1) weakly cemented iron-manganese nodules throughout; strongly acid; clear smooth boundary.

Btg1—19 to 28 inches; grayish brown (10YR 5/2) silty clay loam; strong fine prismatic structure parting to strong fine angular blocky; firm; many distinct gray (10YR 5/1) clay films on faces of peds; common medium prominent yellowish red (5YR 4/6) masses of oxidized iron in the matrix; strongly acid; clear smooth boundary.

Btg2—28 to 37 inches; grayish brown (10YR 5/2) silty clay loam; moderate medium angular blocky structure; firm; common distinct gray (10YR 5/1) clay films on faces of peds; common medium distinct dark yellowish brown (10YR 4/4) extremely weakly cemented iron-manganese accumulations in the matrix; strongly acid; clear smooth boundary.

2Btg3—37 to 43 inches; light brownish gray (2.5Y 6/2) silty clay loam; weak coarse angular blocky structure; firm; few faint gray (10YR 5/1) clay films on faces of peds; common medium and coarse distinct dark yellowish brown (10YR 4/4) extremely weakly cemented iron-manganese accumulations in the matrix; about 15 percent sand; few pebbles; strongly acid; gradual smooth boundary.

2BCg—43 to 60 inches; light brownish gray (2.5Y 6/2) silty clay loam; weak coarse angular blocky structure; firm; common coarse distinct dark yellowish brown (10YR 4/4) extremely weakly cemented iron-manganese accumulations in the matrix; about 15 percent sand in the upper part (the content of sand increases with increasing depth); few pebbles; moderately acid; gradual smooth boundary.

2Cg—60 to 80 inches; dark grayish brown (10YR 4/2) silt loam; massive; firm; many coarse prominent gray (N 6/) and light gray (N 7/) iron depletions in the matrix; few fine and medium distinct black (10YR 2/1) iron-manganese concretions throughout; about 20 percent sand; about 2 percent pebbles; slightly acid.

Range in Characteristics

Thickness of the dark surface layer: 7 to 9 inches
Thickness of the loess: 30 to 55 inches
Depth to the base of the argillic horizon: 40 to 65 inches

Ap or A horizon:
Hue—10YR
Value—2 to 3
Chroma—1 to 3
Texture—silt loam
Reaction—strongly acid to neutral

E horizon:
Hue—10YR or 2.5Y
Value—4 to 7
Chroma—1 or 2
Texture—silt loam or silt
Reaction—very strongly acid to moderately acid; ranges to neutral in areas that have been limed

B/E, BE, or EB horizon:
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—1 or 2
Texture—silt loam or silty clay loam
Reaction—very strongly acid to moderately acid

Btg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 or 2
Texture—silty clay loam or silty clay
Reaction—very strongly acid to moderately acid

2Btg or 2BCg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 or 2
Texture—silty clay loam, clay loam, loam, or silt loam
Content of rock fragments—0 to 10 percent
Reaction—strongly acid to slightly acid

2Cg, 3Ab, or 3Btb horizon:
Hue—10YR or 2.5Y
Value—3 to 6
Chroma—1 or 2

Texture—silty clay loam, clay loam, loam, or silt loam
Content of rock fragments—2 to 15 percent

Crawleyville Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Aeric Endoaqualfs

Typical Pedon

Crawleyville fine sandy loam, in a cultivated field on a terrace at an elevation of about 380 feet above mean sea level; 2,170 feet north and 1,790 feet west of the southeast corner of sec. 14, T. 4 S., R. 8 E.; White County, Illinois; USGS Springerton, Illinois, topographic quadrangle; lat. 38 degrees 10 minutes 31 seconds N. and long. 88 degrees 17 minutes 33 seconds W.; UTM Zone 16, Easting 386781, Northing 4226065; NAD 83:

Ap—0 to 10 inches; brown (10YR 4/3) fine sandy loam, very pale brown (10YR 7/3) dry; weak fine granular structure; very friable; few very fine roots; few fine distinct black (10YR 2/1) manganese masses; slightly acid; abrupt smooth boundary.

E—10 to 15 inches; brown (10YR 5/3) fine sandy loam; weak fine subangular blocky structure; very friable; few very fine roots; common medium distinct light gray (10YR 7/2) clay depletions and few fine prominent yellowish brown (10YR 5/8) masses of oxidized iron; few fine distinct black (10YR 2/1) manganese masses; slightly acid; clear smooth boundary.

BE—15 to 18 inches; brown (10YR 5/3) loam; weak fine subangular blocky structure; friable; few very fine roots; many medium faint light gray (10YR 7/2) clay depletions; few fine prominent yellowish brown (10YR 5/8) masses of oxidized iron; moderately acid; abrupt smooth boundary.

Btg1—18 to 23 inches; grayish brown (10YR 5/2) sandy clay loam; moderate medium subangular blocky structure; firm; few very fine roots; many distinct grayish brown (10YR 5/2) clay films on faces of peds; few medium faint light gray (10YR 7/2) clay depletions; many fine prominent yellowish brown (10YR 5/6) masses of oxidized iron; few fine distinct black (10YR 2/1) manganese masses; very strongly acid; clear smooth boundary.

Btg2—23 to 30 inches; grayish brown (10YR 5/2) sandy clay loam; moderate coarse subangular blocky structure; firm; many distinct grayish brown (10YR 5/2) clay films on faces of peds; many medium prominent yellowish brown (10YR 5/6) masses of oxidized iron; few fine distinct black (10YR 2/1) manganese masses; very strongly acid; gradual smooth boundary.

Btg3—30 to 45 inches; grayish brown (10YR 5/2) sandy clay loam; moderate coarse subangular blocky structure; firm; many distinct grayish brown (10YR 5/2) clay films on faces of peds; few distinct dark grayish brown (10YR 4/2) clay films in channels; many medium prominent yellowish brown (10YR 5/6) masses of oxidized iron; common fine distinct black (10YR 2/1) manganese masses; slightly acid; gradual smooth boundary.

Btg4—45 to 60 inches; grayish brown (2.5Y 5/2) loam; weak coarse subangular blocky structure; firm; common distinct grayish brown (10YR 5/2) clay films on faces of peds and few distinct dark grayish brown (10YR 4/2) clay films in channels; many medium prominent yellowish brown (10YR 5/8) masses of oxidized iron; neutral.

Range in Characteristics

Depth to the base of the argillic horizon: 40 to 60 inches
Content of rock fragments: 0 to 3 percent throughout the series control section

Ap horizon:
Hue—10YR

Value—4 or 5
Chroma—2 or 3
Texture—loam or fine sandy loam
Reaction—moderately acid or slightly acid, depending on liming history

E horizon:
Hue—10YR
Value—4 to 6
Chroma—2 or 3
Texture—loam or fine sandy loam
Reaction—very strongly acid to moderately acid; ranges to slightly acid in areas that have been limed

BE horizon (if it occurs):
Hue—10YR
Value—4 or 5
Chroma—2 or 3
Texture—fine sandy loam, loam, sandy loam, or sandy clay loam
Reaction—very strongly acid to moderately acid

Btg or Bt horizon:
Hue—10YR
Value—5 to 7
Chroma—1 to 6
Texture—fine sandy loam, loam, sandy loam, or sandy clay loam
Reaction—very strongly acid or strongly acid in the upper part; ranges to neutral in the lower part

BCg or Cg horizon:
Hue—10YR
Value—5 to 7
Chroma—1 or 2
Texture—fine sandy loam or sandy loam
Reaction—very strongly acid to neutral

Creal Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Aeric Endoaqualfs

Typical Pedon

Creal silt loam, in a nearly level area in a cultivated field at an elevation of about 412 feet above mean sea level; approximately 2,244 feet north and 110 feet west of the southeast corner of sec. 36, T. 3 S., R. 5 E.; Hamilton County, Illinois; USGS Belle Prairie City, Illinois, topographic quadrangle; lat. 38 degrees 13 minutes 07 seconds N. and long. 88 degrees 35 minutes 37 seconds W.; UTM Zone 16, Easting 360500, Northing 4231284; NAD 83:

Ap—0 to 9 inches; dark grayish brown (10YR 4/2) silt loam, pale brown (10YR 6/3) dry; moderate medium granular structure; friable; slightly acid; abrupt smooth boundary.

E—9 to 18 inches; brown (10YR 5/3) silt loam; weak thick platy structure; friable; few dark grayish brown (10YR 4/2) organic coatings on faces of peds; few medium distinct yellowish brown (10YR 5/6) masses of oxidized iron and common medium faint dark yellowish brown (10YR 4/4) masses of oxidized iron and manganese; few fine distinct black (10YR 2/1) iron-manganese nodules; moderately acid; clear smooth boundary.

Eg—18 to 27 inches; light brownish gray (10YR 6/2) silt loam; weak thick platy structure; friable; common medium vesicular pores; common medium prominent yellowish brown (10YR 5/6) masses of oxidized iron; common coarse prominent black (10YR 2/1) iron-manganese nodules; very strongly acid; clear smooth boundary.

Btg1—27 to 32 inches; light brownish gray (10YR 6/2) silty clay loam; moderate medium angular and subangular blocky structure; firm; many distinct grayish brown (10YR 5/2) clay films on faces of peds; common medium prominent strong brown (7.5YR 5/6) masses of oxidized iron; very strongly acid; clear smooth boundary.

Btg2—32 to 41 inches; light brownish gray (10YR 6/2) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; many distinct grayish brown (10YR 5/2) clay films on faces of peds; many medium prominent yellowish brown (10YR 5/6) masses of oxidized iron; many medium prominent black (10YR 2/1) iron-manganese nodules; very strongly acid; clear smooth boundary.

Btg3—41 to 55 inches; light brownish gray (10YR 6/2) silty clay loam; weak coarse prismatic structure; firm; few faint grayish brown (10YR 5/2) clay films on faces of peds; many medium prominent yellowish brown (10YR 5/6) masses of oxidized iron; common medium prominent black (10YR 2/1) iron-manganese nodules; strongly acid; clear smooth boundary.

BCg—55 to 60 inches; light brownish gray (10YR 6/2) silt loam; weak coarse prismatic structure; friable; many medium prominent yellowish brown (10YR 5/6) masses of oxidized iron; slightly acid.

Range in Characteristics

Depth to the top of the argillic horizon: 24 to 36 inches

Particle-size control section: Averages 25 to 35 percent clay and less than 15 percent sand

Ap horizon:

Hue—10YR
Value—4 or 5
Chroma—2 or 3
Texture—silt loam
Reaction—strongly acid to neutral

E or Eg horizon:

Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—silt loam
Reaction—extremely acid to strongly acid; ranges to neutral in the upper part in some pedons in areas that have been limed

Btg or Bt horizon:

Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 4
Texture—silty clay loam or silt loam
Reaction—very strongly acid to slightly acid

BCg, 2Btg, or 2BCg horizon (if it occurs):

Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 4

Texture—silt loam or silty clay loam
Reaction—very strongly acid to neutral

Dickinson Series

Taxonomic classification: Coarse-loamy, mixed, superactive, mesic Typic Hapludolls

Typical Pedon

Dickinson sandy loam, in a cultivated field on a stream terrace at an elevation of about 190 feet above mean sea level; 360 feet north and 1,720 feet west of the center of sec. 17, T. 17 N., R. 6 E.; Bureau County, Illinois; USGS Mineral, Illinois, topographic quadrangle; lat. 41 degrees 27 minutes 37 seconds N. and long. 89 degrees 50 minutes 09 seconds W.; UTM Zone 16, Easting 263148, Northing 4593741; NAD 83:

Ap—0 to 8 inches; very dark brown (10YR 2/2) sandy loam, dark grayish brown (10YR 4/2) dry; weak fine granular structure; very friable; few fine roots; moderately acid; abrupt smooth boundary.

A1—8 to 15 inches; very dark brown (10YR 2/2) sandy loam, dark grayish brown (10YR 4/2) dry; weak medium subangular blocky structure; very friable; few fine roots; moderately acid; clear smooth boundary.

A2—15 to 20 inches; very dark grayish brown (10YR 3/2) sandy loam, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure; very friable; few fine roots; common very dark brown (10YR 2/2) organic stains on faces of peds; slightly acid; clear smooth boundary.

Bw—20 to 31 inches; brown (10YR 4/3) sandy loam; weak medium prismatic structure parting to weak medium subangular blocky; very friable; few fine roots; many distinct dark brown (10YR 3/3) organic stains on faces of peds; slightly acid; clear smooth boundary.

Bt—31 to 36 inches; yellowish brown (10YR 5/6) loamy sand; weak medium prismatic structure parting to weak medium subangular blocky; very friable; common distinct brown (10YR 4/3) clay bridges between sand grains; slightly acid; clear smooth boundary.

BC—36 to 47 inches; yellowish brown (10YR 5/6) sand; weak coarse prismatic structure; very friable; moderately acid; clear smooth boundary.

C—47 to 60 inches; yellowish brown (10YR 5/6) sand; single grain; loose; strong brown (7.5YR 5/6) bands of loamy sand $^1/_2$ inch to 2 inches thick at depths of 52, 56, and 58 inches; moderately acid.

Range in Characteristics

Ap or A horizon:
Hue—10YR
Value—2 to 3
Chroma—1 to 3
Texture—fine sandy loam, sandy loam, or loam
Reaction—moderately acid to neutral

Bw or Bt horizon:
Hue—10YR
Value—3 to 5
Chroma—2 to 6
Texture—sandy loam or fine sandy loam; ranges to loamy sand in the lower part
Reaction—strongly acid to slightly acid

BC and/or C horizon:
Hue—7.5YR or 10YR
Value—4 or 5

Chroma—3 to 6
Texture—loamy sand, sand, loamy fine sand, or fine sand
Reaction—moderately acid to moderately alkaline

Drury Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Dystric Eutrudepts

Typical Pedon

Drury silt loam, on a rolling footslope in a wooded field at an elevation of about 445 feet above mean sea level; approximately 1,995 feet north and 85 feet west of the center of sec. 32, T. 12 S., R. 2 W.; Union County, Illinois; USGS Jonesboro, Illinois, topographic quadrangle; lat. 37 degrees 26 minutes 06 seconds N. and long. 89 degrees 21 minutes 12 seconds W.; UTM Zone 16, Easting 291793, Northing 4145736; NAD 83:

A1—0 to 2 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; moderate fine granular structure; very friable; moderately acid; clear smooth boundary.
A2—2 to 6 inches; dark brown (10YR 3/3) silt loam, pale brown (10YR 6/3) dry; weak medium granular structure; friable; few faint very dark grayish brown (10YR 3/2) organic stains on faces of peds; moderately acid; clear smooth boundary.
Bw1—6 to 15 inches; brown (10YR 4/3) silt loam; weak fine subangular blocky structure; friable; few faint very dark grayish brown (10YR 3/2) organic stains on faces of peds; common vesicular pores; moderately acid; gradual smooth boundary.
Bw2—15 to 25 inches; dark yellowish brown (10YR 4/4) silt loam; weak fine and medium subangular blocky structure; very friable; few faint dark brown (10YR 3/3) organic stains on faces of peds; common vesicular pores; moderately acid; gradual smooth boundary.
Bw3—25 to 33 inches; dark yellowish brown (10YR 4/4) silt loam; weak medium subangular blocky structure; friable; common distinct pale brown (10YR 6/3) silt coatings on faces of peds; few vesicular pores; slightly acid; gradual smooth boundary.
C1—33 to 49 inches; dark yellowish brown (10YR 4/4) and pale brown (10YR 6/3) silt loam; massive; friable; slightly acid; gradual smooth boundary.
C2—49 to 80 inches; light brownish gray (10YR 6/2) silt loam; massive; friable; few fine distinct dark yellowish brown (10YR 4/4) and common fine faint brown (10YR 5/3) masses of oxidized iron and manganese; slightly acid.

Range in Characteristics

Depth to the base of the cambic horizon: Typically 30 to 40 inches; ranges from 26 to 45 inches
Depth to carbonates: More than 40 inches
Depth to a buried soil (if it occurs): More than 50 inches
Particle-size control section: Averages 18 to 25 percent clay

Ap or A horizon:
Hue—10YR
Value—3 or 4
Chroma—2 to 4
Texture—silt loam or silt
Reaction—moderately acid to slightly alkaline

E horizon (if it occurs):
Hue—10YR
Value—4 or 5

Chroma—3 or 4
Texture—silt loam or silt
Reaction—moderately acid to neutral

Bw horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6 in the upper part; 2 to 6 in the lower part
Texture—silt loam
Reaction—moderately acid to neutral

C horizon:
Hue—10YR
Value—3 to 6
Chroma—2 to 4
Texture—silt loam, loam, or very fine sandy loam
Reaction—slightly acid to slightly alkaline

Evansville Series

Taxonomic classification: Fine-silty, mixed, superactive, nonacid, mesic Typic Endoaquepts

Typical Pedon

Evansville silt loam, in a nearly level area in a cultivated field at an elevation of about 385 feet above mean sea level; 1,060 feet south and 530 feet west of the northeast corner of sec. 19, T. 6 S., R. 9 W.; Vanderburgh County, Indiana; USGS Newburgh, Indiana, topographic quadrangle; lat. 37 degrees 59 minutes 18.3 seconds N. and long. 87 degrees 27 minutes 0.5 second W.; UTM Zone 16, Easting 460472, Northing 4204616; NAD 83:

Ap—0 to 9 inches; dark grayish brown (2.5Y 4/2) silt loam, pale brown (10YR 6/3) dry; weak medium granular structure; friable; slightly acid; clear smooth boundary.

Bg1—9 to 21 inches; grayish brown (2.5Y 5/2) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; firm; few dark gray (10YR 4/1) organic stains on faces of peds; common medium distinct light olive brown (2.5Y 5/4) extremely weakly cemented iron-manganese accumulations in the matrix; neutral; clear wavy boundary.

Bg2—21 to 32 inches; olive gray (5Y 5/2) silty clay loam; weak coarse prismatic structure parting to moderate medium subangular blocky; firm; common dark gray (5Y 4/1) organic stains on faces of peds; common medium prominent light olive brown (2.5Y 5/6) masses of oxidized iron in the matrix; neutral; clear smooth boundary.

Bg3—32 to 44 inches; olive gray (5Y 5/2) silty clay loam; weak coarse subangular blocky structure; firm; common dark gray (5Y 4/1) organic stains in channels and on faces of peds; common medium distinct light olive brown (2.5Y 5/4) extremely weakly cemented iron-manganese accumulations in the matrix; neutral; gradual wavy boundary.

Cg—44 to 66 inches; grayish brown (2.5Y 5/2) and light olive brown (2.5Y 5/4), stratified silt loam and silty clay loam; firm; massive; slightly alkaline.

Range in Characteristics

Ap horizon:
Hue—10YR or 2.5Y
Value—4 or 5
Chroma—2

Texture—silt loam or silty clay loam
Reaction—slightly acid or neutral

Bg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 or 2
Texture—silt loam or silty clay loam
Reaction—slightly acid to slightly alkaline

Bw or BC horizon (if it occurs):
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—3 or 4
Texture—silt loam or silty clay loam
Reaction—slightly acid to slightly alkaline

Cg or C horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 6
Texture—stratified silt loam and silty clay loam
Reaction—neutral to moderately alkaline

Ginat Series

Taxonomic classification: Fine-silty, mixed, active, mesic Typic Endoaqualfs
Taxadjunct features: The Ginat soils in this survey area have fragic soil properties in the lower part of the control section, which are not defined for the series. This difference, however, does not significantly affect the use and management of the soils. These soils are classified as fine-silty, mixed, active, mesic Fragic Epiaqualfs.

Typical Pedon

Ginat silt loam, on a terrace in a cultivated field at an elevation of about 332 feet above mean sea level; approximately 300 feet north and 120 feet east of the southwest corner of the NE1/4 SE1/4 of sec. 3, T. 14 S., R. 5 E.; Pope County, Illinois; USGS Reevesville, Illinois, topographic quadrangle; lat. 37 degrees 19 minutes 32 seconds N. and long. 88 degrees 38 minutes 27 seconds W.; UTM Zone 16, Easting 354620, Northing 4132245; NAD 83:

Ap—0 to 6 inches; brown (10YR 5/3) silt loam, light gray (10YR 7/2) dry; moderate medium and coarse granular structure; friable; common fine prominent black (N 2.5/), strong brown (7.5YR 5/8), and dark brown (7.5YR 3/2) iron-manganese concretions; very strongly acid; clear smooth boundary.

E1—6 to 11 inches; pale brown (10YR 6/3) silt loam; weak medium platy structure; firm or friable; common fine vesicular pores; few fine distinct light gray (10YR 7/1) iron depletions; many fine prominent black (N 2.5/), dark brown (7.5YR 3/2), and brown (7.5YR 4/4) iron-manganese concretions; very strongly acid; clear smooth boundary.

E2—11 to 19 inches; light gray (10YR 7/2) silt loam; weak medium subangular blocky structure; friable; common fine vesicular pores; common medium distinct yellowish brown (10YR 5/4) and few fine faint pale brown (10YR 6/3) masses of oxidized iron; many fine prominent black (N 2.5/), strong brown (7.5YR 5/8), and dark brown (7.5YR 3/2) iron-manganese concretions; very strongly acid; clear smooth boundary.

BEg—19 to 24 inches; light brownish gray (10YR 6/2) silty clay loam; weak medium subangular blocky structure; friable or firm; common fine vesicular pores; few fine prominent yellowish brown (10YR 5/8) and few fine faint brown (10YR 5/3) masses of oxidized iron; many fine prominent black (N 2.5/) and strong brown (7.5YR 5/8) iron-manganese concretions; very strongly acid; clear smooth boundary.

Btg—24 to 34 inches; light brownish gray (2.5Y 6/2) silty clay loam; weak medium prismatic structure parting to weak medium subangular blocky; firm; few faint grayish brown (2.5Y 5/2) clay films on faces of peds; common fine faint light gray (2.5Y 7/2) iron depletions; few fine prominent yellowish red (5YR 5/6) and many fine prominent black (N 2.5/), brown (7.5YR 4/4), and strong brown (7.5YR 5/8) iron-manganese concretions; very strongly acid; clear smooth boundary.

Btxg1—34 to 43 inches; grayish brown (2.5Y 5/2) silty clay loam; weak medium prismatic structure parting to moderate fine and medium subangular blocky; very firm; few faint grayish brown (2.5Y 5/2) clay films and few faint light brownish gray (10YR 6/2) silt coatings on faces of peds; few fine distinct dark yellowish brown (10YR 4/4) masses of oxidized iron and manganese; common fine prominent black (N 2.5/) and strong brown (7.5YR 5/6) iron-manganese concretions; brittle; very strongly acid; clear smooth boundary.

Btxg2—43 to 49 inches; grayish brown (2.5Y 5/2) silty clay loam; moderate fine subangular blocky structure; very firm; few faint grayish brown (2.5Y 5/2) clay films on faces of peds; common fine prominent light olive brown (2.5Y 5/6) and common fine distinct dark yellowish brown (10YR 4/4) masses of oxidized iron and manganese; few fine faint light gray (10YR 7/2) iron depletions; brittle; very strongly acid; clear smooth boundary.

B´tg—49 to 55 inches; grayish brown (10YR 5/2) silty clay loam; weak fine subangular blocky structure; firm; few faint grayish brown (10YR 5/2) clay films on faces of peds; common fine faint light gray (10YR 7/2) iron depletions and few medium distinct dark yellowish brown (10YR 4/4) masses of oxidized iron and manganese; few fine prominent black (N 2.5/) iron-manganese concretions; very strongly acid; clear smooth boundary.

2Bt1—55 to 65 inches; dark yellowish brown (10YR 4/4) silty clay loam; weak coarse subangular blocky structure; firm; few prominent gray (10YR 6/1) and brown (7.5YR 5/2) clay films on faces of peds; many fine distinct and common medium distinct grayish brown (10YR 5/2) iron depletions; few fine distinct black (10YR 2/1) manganese coatings on faces of peds; very strongly acid; clear smooth boundary.

2Bt2—65 to 80 inches; dark yellowish brown (10YR 4/4) silt loam; weak coarse subangular blocky structure; friable; few distinct gray (10YR 6/1) clay films in root and worm channels and pores; few fine distinct yellowish brown (10YR 5/6) masses of oxidized iron; common medium distinct light brownish gray (10YR 6/2) iron depletions; few fine distinct black (10YR 2/1) manganese coatings on faces of peds; strongly acid.

Range in Characteristics

Depth to the base of the argillic horizon: More than 60 inches

Ap or A horizon:
Hue—10YR
Value—4 or 5
Chroma—1 to 3
Texture—silt loam
Reaction—strongly acid or very strongly acid; ranges to neutral in areas that have been limed

E horizon:
Hue—10YR

Value—5 to 7
Chroma—1 to 3
Texture—silt loam
Reaction—strongly acid or very strongly acid; ranges to neutral in areas that have been limed

BEg and Btg horizons:
Hue—10YR or 2.5Y
Value—5 to 7
Chroma—1 or 2
Texture—silt loam or silty clay loam
Reaction—very strongly acid to moderately acid

Btxg or B´tg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—5 to 7
Chroma—1 or 2
Texture—silt loam or silty clay loam
Reaction—very strongly acid or strongly acid

2Bt or 2Btg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 7
Chroma—1 to 4
Texture—silt loam or silty clay loam; less commonly silty clay, clay loam, or loam
Content of clay—21 to 42 percent
Content of sand—5 to 25 percent
Content of rock fragments—0 to 5 percent pebbles
Reaction—very strongly acid to slightly alkaline

Grantsburg Series

Taxonomic classification: Fine-silty, mixed, active, mesic Oxyaquic Fragiudalfs

Typical Pedon

Grantsburg silt loam, on a southwest-facing, convex slope of 7 percent in a wooded area at an elevation of about 500 feet above mean sea level; approximately 992 feet east and 106 feet south of the northwest corner of sec. 4, T. 13 S., R. 5 E.; Pope County, Illinois; USGS Glendale, Illinois, topographic quadrangle; lat. 37 degrees 25 minutes 30 seconds N. and long. 88 degrees 40 minutes 07 seconds W.; UTM Zone 16, Easting 352358, Northing 4143340; NAD 83:

A—0 to 2 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; many roots; very strongly acid; abrupt smooth boundary.
E—2 to 7 inches; brown (10YR 5/3) silt loam; weak medium granular structure; friable; many roots; very strongly acid; clear smooth boundary.
BE—7 to 12 inches; strong brown (7.5YR 5/6) silt loam; weak fine subangular blocky structure; friable; many roots; very strongly acid; gradual smooth boundary.
Bt1—12 to 20 inches; strong brown (7.5YR 5/6) silt loam; moderate medium subangular blocky structure; friable; common roots; few distinct brown (7.5YR 5/4) clay films on faces of peds; few fine prominent black (10YR 2/1) iron-manganese concretions; very strongly acid; gradual smooth boundary.
Bt2—20 to 24 inches; yellowish brown (10YR 5/4) silt loam; weak medium subangular blocky structure; friable; few roots; few distinct brown (7.5YR 5/4) clay films on faces of peds; very strongly acid; abrupt smooth boundary.

Bt/E—24 to 27 inches; brown (10YR 5/3) silty clay loam (Bt) and many prominent light gray (10YR 7/1) silt coatings on faces of peds and as filling between peds (E); moderate fine subangular blocky structure; firm; common roots; few fine distinct black (10YR 2/1) iron-manganese concretions; very strongly acid; clear smooth boundary.

B´t—27 to 38 inches; yellowish brown (10YR 5/4) silty clay loam; weak coarse prismatic structure parting to moderate medium angular and subangular blocky; very firm and hard; few roots; common distinct brown (7.5YR 4/4) clay films on faces of peds and lining pores and channels; few white (10YR 8/1) uncoated silt grains on faces of peds; common medium prominent strong brown (7.5YR 5/8) masses of oxidized iron and common medium distinct light gray (10YR 7/1) iron depletions; few fine prominent black (N 2.5/) iron-manganese concretions throughout; slightly brittle; very strongly acid; clear smooth boundary.

Btx1—38 to 52 inches; yellowish brown (10YR 5/4) silt loam; moderate very coarse prismatic structure parting to weak coarse angular and subangular blocky; very firm and hard; few roots, mostly confined to cracks between peds; few distinct brown (7.5YR 4/4) clay films on faces of peds and lining pores and some old root channels; light gray (10YR 7/1) silt or silt loam fillings in vertical cracks about $^{1}/_{2}$ inch to $1^{1}/_{2}$ inches in width that surround the polygons of the prismatic structure; common medium prominent strong brown (7.5YR 5/8) masses of oxidized iron and common medium distinct light gray (10YR 7/1) iron depletions; few fine prominent black (N 2.5/) iron-manganese concretions throughout; brittle; very strongly acid; clear smooth boundary.

Btx2—52 to 61 inches; yellowish brown (10YR 5/4) silt loam; moderate very coarse prismatic structure parting to weak coarse angular blocky; very firm and hard; few roots, mostly confined to cracks between peds; few distinct dark yellowish brown (10YR 4/4) clay films on vertical faces of peds and lining a few old worm holes and root channels; light gray (10YR 7/1) silt or silt loam fillings in vertical cracks that surround the polygons of the prismatic structure; common medium prominent brownish yellow (10YR 6/8) masses of oxidized iron and common medium distinct light brownish gray (10YR 6/2) iron depletions; few fine prominent black (N 2.5/) iron-manganese concretions throughout; brittle; strongly acid; gradual smooth boundary.

C—61 to 80 inches; yellowish brown (10YR 5/4) silt loam; massive; friable; common medium prominent brownish yellow (10YR 6/8) masses of oxidized iron and common medium distinct light brownish gray (10YR 6/2) iron depletions; moderately acid.

Range in Characteristics

Depth to the top of the argillic horizon: 8 to 23 inches
Depth to the second sequum (Bt/E and B´t horizons): 20 to 36 inches
Depth to the fragipan: 24 to 40 inches
Depth of soil development: 48 to more than 70 inches
Particle-size control section: Averages 25 to 35 percent clay and 2 to 10 percent sand
Reaction in the subsoil: Strongly acid to extremely acid

A horizon:
Hue—10YR
Value—3 or 4
Chroma—2 or 3
Texture—silt loam; silty clay loam in some pedons in severely eroded areas

E horizon:
Hue—10YR
Value—5 or 6

Chroma—3 or 4
Texture—silt loam or silty clay loam

BE horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—silt loam or silty clay loam
Other characteristics—clay films or silt coatings on the faces of peds in some pedons

Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—silt loam or silty clay loam

Bt/E horizon:
Hue—7.5YR or 10YR (Bt); 10YR (E)
Value—4 to 6 (Bt); 5 to 8 (E)
Chroma— 3 to 6 (Bt); 1 to 4 (E)
Texture—silty clay loam or silt loam (Bt); silt or silt loam (E)

B´t horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 6
Texture—silt loam or silty clay loam
Other characteristics—the horizon is firm or very firm, typically brittle in some part, but brittleness is not observed in all pedons; clay films are on both vertical and horizontal faces of peds

Btx or 2Btx horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 6
Texture—silt loam or silty clay loam (horizon averages less than 10 percent sand by volume)
Other characteristics—primary structure is very coarse prismatic; the polygons are separated or surrounded by cracks filled with silt that has grayer color and typically less clay than the interiors of the polygons

C or 2C horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 8
Texture—silt loam or silty clay loam

Harco Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Aquic Argiudolls

Typical Pedon

Harco silt loam, in a cultivated field on a stream terrace at an elevation of about 380 feet above mean sea level; 300 feet east and 1,420 feet north of the southwest corner of sec. 35, T. 7 S., R. 9 E.; Gallatin County, Illinois; lat. 37 degrees 52 minutes 06

seconds N. and long. 88 degrees 11 minutes 30 seconds W.; UTM Zone 16, Easting 395175, Northing 4191881; NAD 83:

Ap—0 to 9 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; weak fine granular structure; friable; many very fine roots and common worm casts; neutral; abrupt smooth boundary.

A—9 to 14 inches; black (10YR 2/1) silt loam, very dark gray (10YR 3/1) crushed, gray (10YR 5/1) dry; moderate medium granular structure; friable; many very fine roots; few medium prominent yellowish brown (10YR 5/6) masses of oxidized iron; neutral; gradual smooth boundary.

BA—14 to 17 inches; very dark gray (10YR 3/1) silt loam, grayish brown (10YR 5/2) dry; weak fine and medium subangular blocky structure; firm; many very fine roots; common fine distinct olive brown (2.5Y 4/3) extremely weakly cemented iron-manganese accumulations; few fine prominent yellowish brown (10YR 5/6) masses of oxidized iron; neutral; clear smooth boundary.

Bt1—17 to 23 inches; olive brown (2.5Y 4/3) silty clay loam; moderate medium subangular blocky structure; firm; common very fine roots; many distinct and prominent very dark gray (10YR 3/1) organoargillans on faces of peds and in root channels; common fine faint yellowish brown (10YR 5/4) masses of oxidized iron; common medium prominent reddish black (2.5YR 2.5/1) iron-manganese concretions; neutral; clear smooth boundary.

Bt2—23 to 31 inches; olive brown (2.5Y 4/3) silty clay loam; weak medium prismatic structure parting to moderate medium and coarse subangular blocky; firm; common very fine roots; many distinct very dark gray (10YR 3/1) organoargillans on faces of peds and in root channels; common fine prominent yellowish brown (10YR 5/6) and common fine distinct light olive brown (2.5Y 5/6) masses of oxidized iron; few fine prominent reddish black (2.5YR 2.5/1) iron-manganese concretions; neutral; gradual smooth boundary.

Bt3—31 to 39 inches; olive (5Y 5/3) silty clay loam; weak medium prismatic structure parting to weak medium subangular blocky; firm; few very fine roots; few distinct dark grayish brown (2.5Y 4/2) clay films on vertical faces of peds and few faint dark grayish brown (2.5Y 4/2) clay films on horizontal faces of peds; common faint very dark gray (10YR 3/1) organic stains in root channels; common medium distinct dark yellowish brown (10YR 4/4) and common medium prominent yellowish brown (10YR 5/6) masses of oxidized iron; few fine prominent reddish black (2.5YR 2.5/1) iron-manganese concretions; neutral; gradual smooth boundary.

C1—39 to 49 inches; mixed grayish brown (2.5Y 5/2), light olive brown (2.5Y 5/3), and yellowish brown (10YR 5/6) silt loam; massive; friable; common faint very dark gray (10YR 3/1) clay films in root channels; few fine prominent reddish black (2.5YR 2.5/1) iron-manganese concretions; slightly effervescent; slightly alkaline; diffuse smooth boundary.

C2—49 to 61 inches; yellowish brown (10YR 5/6) silt loam; massive; friable; common medium prominent light olive brown (2.5Y 5/3) iron depletions; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 18 inches
Depth to carbonates: 30 to 40 inches
Other features: Some pedons have a BC horizon.

Ap or A horizon:
Hue—10YR
Value—2 to 3
Chroma—1 or 2

Texture—silt loam
Reaction—slightly acid or neutral

BA horizon (if it occurs):
Hue—10YR
Value—3
Chroma—1 or 2
Texture—silt loam
Reaction—slightly acid or neutral

Bt horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 4
Texture—silt loam or silty clay loam
Reaction—slightly acid or neutral

C horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 6
Texture—silt loam
Reaction—slightly alkaline or moderately alkaline

Haymond Series

Taxonomic classification: Coarse-silty, mixed, superactive, mesic Dystric Fluventic Eutrudepts

Typical Pedon

Haymond silt loam, on a nearly level flood plain in a cultivated field at an elevation of about 360 feet above mean sea level; about 1,650 feet south and 530 feet east of the northwest corner of sec. 21, T. 12 S., R. 2 W.; Union County, Illinois; USGS Jonesboro, Illinois, topographic quadrangle; lat. 37 degrees 27 minutes 45 seconds N. and long. 89 degrees 20 minutes 19 seconds W.; UTM Zone 16, Easting 293167, Northing 4148751; NAD 83:

Ap—0 to 10 inches; brown (10YR 4/3) silt loam, light brownish gray (10YR 6/2) dry; weak medium granular structure; friable; moderately acid; gradual smooth boundary.
A—10 to 20 inches; brown (10YR 4/3) silt loam; weak medium granular structure; very friable; moderately acid; gradual smooth boundary.
Bw1—20 to 42 inches; yellowish brown (10YR 5/4) silt loam; weak medium subangular blocky structure; friable; moderately acid; gradual smooth boundary.
Bw2—42 to 60 inches; yellowish brown (10YR 5/4) silt loam that has pockets of pale brown (10YR 6/3) material; weak fine subangular blocky structure; friable; moderately acid; gradual smooth boundary.
C—60 to 80 inches; pale brown (10YR 5/3) silt loam; massive; friable; moderately acid.

Range in Characteristics

Depth to the base of the cambic horizon: 30 to 60 inches
Other characteristics: Loamy strata that may contain pebbles or flagstones are below a depth of 40 inches in some pedons.

Ap or A horizon:
Hue—10YR
Value—4 or 5 (6 or 7 dry)

Chroma—2 to 4
Texture—silt loam or silt

Bw horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam

C horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam, fine sandy loam, sandy loam, or loam

Henshaw Series

Taxonomic classification: Fine-silty, mixed, active, mesic Aquic Hapludalfs

Typical Pedon

Henshaw silt loam, on a nearly level lake plain in a cultivated field at an elevation of about 380 feet above mean sea level; approximately 2,160 feet west and 120 feet south of the northeast corner of sec. 4, T. 4 S., R. 10 E.; White County, Illinois; USGS Crossville, Illinois, topographic quadrangle; lat. 38 degrees 12 minutes 43 seconds N. and long. 88 degrees 06 minutes 10 seconds W.; UTM Zone 16, Easting 403462, Northing 4229917; NAD 83:

Ap—0 to 6 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak fine granular structure; very friable; few very fine roots; slightly acid; abrupt smooth boundary.

E—6 to 11 inches; brownish yellow (10YR 6/6) silt loam; weak medium platy structure; very friable; few very fine roots; few fine spherical iron-manganese concretions; strongly acid; clear smooth boundary.

Bt1—11 to 17 inches; yellowish brown (10YR 5/4) silty clay loam; moderate fine subangular blocky structure; friable; few very fine roots; few distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; many prominent white (10YR 8/1) (dry) silt coatings on faces of peds; common fine distinct yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; few fine spherical iron-manganese concretions; strongly acid; gradual smooth boundary.

Bt2—17 to 31 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium prismatic structure parting to moderate fine and medium subangular blocky; firm; few very fine roots; common distinct grayish brown (10YR 5/2) and dark yellowish brown (10YR 4/6) clay films on faces of peds; many prominent white (10YR 8/1) (dry) silt coatings on faces of peds; common medium distinct yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; few fine spherical iron-manganese concretions; strongly acid; gradual smooth boundary.

Btg—31 to 44 inches; grayish brown (2.5Y 5/2) silty clay loam; moderate medium subangular blocky structure; friable; few very fine roots; common distinct grayish brown (2.5Y 5/2) clay films on faces of peds; common prominent white (10YR 8/1) (dry) silt coatings on faces of peds; common medium prominent yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; common fine spherical iron-manganese concretions; moderately acid; gradual smooth boundary.

Cg—44 to 60 inches; grayish brown (10YR 5/2) silty clay loam; massive; friable; few very fine roots; common medium prominent yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; few fine spherical iron-manganese concretions; slightly effervescent; slightly alkaline.

Range in Characteristics

Depth to carbonates: 30 to 60 inches
Depth of soil development: 40 to more than 60 inches

Ap or A horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 4
Texture—silt loam
Reaction—strongly acid to slightly alkaline

E horizon (if it occurs):
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 4
Texture—silt loam
Reaction—strongly acid to slightly alkaline

Bt horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—3 to 6
Texture—silt loam or silty clay loam
Reaction—strongly acid to slightly alkaline

Btg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 2
Texture—silt loam or silty clay loam
Reaction—moderately acid to moderately alkaline

BC or BCg horizon (if it occurs):
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 3
Texture—silt loam or silty clay loam
Reaction—moderately acid to moderately alkaline

Cg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 2
Texture—silt loam or silty clay loam; layers of loam or clay loam in some pedons
Reaction—moderately acid to moderately alkaline

Hickory Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Typic Hapludalfs

Typical Pedon

Hickory silt loam, in a wooded area of Hickory-Kell silt loams, 18 to 35 percent slopes, at an elevation of about 465 feet above mean sea level; 1,979 feet west and 1,173 feet north of the southeast corner of sec. 15, T. 3 S., R. 3 E.; Jefferson County, Illinois; USGS Opdyke, Illinois, topographic quadrangle; lat. 38 degrees 15 minutes 39

seconds N. and long. 88 degrees 51 minutes 29 seconds W.; UTM Zone 16, Easting 337441, Northing 4236375; NAD 83:

A—0 to 3 inches; dark brown (10YR 3/3) silt loam, pale brown (10YR 6/3) dry; weak fine granular structure; friable; common fine and medium roots throughout; very strongly acid; clear smooth boundary.

E—3 to 11 inches; brown (10YR 4/3) silt loam; weak thick platy structure; friable; few fine and medium roots throughout; very strongly acid; clear smooth boundary.

EB—11 to 16 inches; dark yellowish brown (10YR 4/4) silt loam; weak thick platy structure parting to weak fine subangular blocky; friable; few fine and medium roots between peds; very strongly acid; clear smooth boundary.

Bt1—16 to 23 inches; strong brown (7.5YR 5/6) loam; moderate medium subangular blocky structure; friable; few fine and medium roots between peds; few distinct brown (10YR 4/3) and dark yellowish brown (10YR 3/4) clay films on faces of peds and lining pores; 5 percent sedimentary pebbles; very strongly acid; clear smooth boundary.

Bt2—23 to 36 inches; strong brown (7.5YR 5/6) clay loam; moderate medium subangular blocky structure; firm; few medium and coarse roots throughout; few distinct brown (10YR 4/3) and dark yellowish brown (10YR 3/4) clay films on faces of peds and lining pores; few medium distinct brown (7.5YR 4/4) masses of oxidized iron in the matrix; 7 percent igneous pebbles; 5 percent sedimentary pebbles; very strongly acid; clear smooth boundary.

Bt3—36 to 43 inches; yellowish brown (10YR 5/6) clay loam; moderate medium angular blocky structure; firm; few distinct dark yellowish brown (10YR 3/4) clay films on faces of peds and lining pores; few fine prominent dark reddish brown (5YR 2.5/2) manganese masses and few medium distinct yellowish red (5YR 4/6) masses of oxidized iron in the matrix; 7 percent igneous pebbles; 7 percent sedimentary pebbles; very strongly acid; gradual smooth boundary.

Bt4—43 to 52 inches; yellowish brown (10YR 5/6) loam; common coarse prominent light gray (10YR 7/2) relict mottles; moderate medium subangular blocky structure; firm; few distinct dark yellowish brown (10YR 3/4) clay films on faces of peds and lining pores; few fine prominent dark reddish brown (5YR 2.5/2) manganese masses and few medium distinct yellowish red (5YR 4/6) masses of oxidized iron in the matrix; 5 percent igneous pebbles; 7 percent sedimentary pebbles; very strongly acid; abrupt smooth boundary.

Bt5—52 to 60 inches; yellowish brown (10YR 5/6) loam; few coarse prominent light gray (10YR 7/2) relict mottles; strong medium subangular blocky structure; very firm; few distinct dark yellowish brown (10YR 3/4) clay films on faces of peds and lining pores; many fine prominent dark reddish brown (5YR 2.5/2) manganese masses in the matrix; 5 percent igneous pebbles; 7 percent sedimentary pebbles; very strongly acid.

Range in Characteristics

Thickness of the loess: 0 to 20 inches
Depth to carbonates: 40 to 72 inches
Depth to bedrock: More than 80 inches

A or Ap horizon:
Hue—7.5YR or 10YR
Value—2 to 5
Chroma—2 to 4
Texture—silt loam, loam, silty clay loam, or clay loam
Content of rock fragments—0 to 5 percent
Reaction—very strongly acid to neutral

E or EB horizon:
Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—silt loam or loam
Content of rock fragments—0 to 5 percent
Reaction—very strongly acid to moderately acid

Bt horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6
Chroma—3 to 6
Texture—clay loam, silty clay loam, or loam
Content of rock fragments—0 to 20 percent
Reaction—very strongly acid to neutral

BC or C horizon (if it occurs):
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—2 to 6
Texture—loam, clay loam, or sandy loam or the gravelly analogs of these textures
Content of rock fragments—0 to 20 percent
Reaction—moderately acid to moderately alkaline

Hosmer Series

Taxonomic classification: Fine-silty, mixed, active, mesic Oxyaquic Fragiudalfs

Typical Pedon

Hosmer silt loam, in a nearly level to rolling, open area at an elevation of about 790 feet above mean sea level; about 1,200 feet north and 2,225 feet east of the southwest corner of sec. 16, T. 11 S., R. 1 E.; Union County, Illinois; USGS Lick Creek, Illinois, topographic quadrangle; lat. 37 degrees 33 minutes 35 seconds N. and long. 89 degrees 06 minutes 32 seconds W.; UTM Zone 16, Easting 313716, Northing 4159068; NAD 83:

Ap—0 to 7 inches; brown (10YR 4/3) silt loam; moderate thin platy structure parting to weak fine granular and weak very fine subangular blocky; friable; common krotovinas; many roots; neutral; abrupt smooth boundary.

Bt1—7 to 18 inches; brown (10YR 5/3) silty clay loam; moderate fine and medium subangular blocky structure; firm; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; few krotovinas; common vesicular pores; common fine iron-manganese concretions; strongly acid; gradual smooth boundary.

Bt2—18 to 25 inches; yellowish brown (10YR 5/4) silt loam; moderate fine and medium subangular blocky structure; firm; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; few medium prominent strong brown (7.5YR 5/8) masses of oxidized iron in the matrix; few fine distinct light brownish gray (10YR 6/2) iron depletions; few fine extremely weakly cemented iron-manganese accumulations; strongly acid; abrupt smooth boundary.

Bt/E—25 to 28 inches; yellowish brown (10YR 5/6) silt loam (Bt); many distinct clay depletions of light brownish gray (10YR 6/2) silt (E); moderate fine and medium subangular blocky structure; firm; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; common fine iron-manganese concretions; strongly acid; abrupt smooth boundary.

Btx1—28 to 35 inches; yellowish brown (10YR 5/6), dark yellowish brown (10YR 4/4), and light brownish gray (2.5Y 6/2) silty clay loam; moderate very coarse

and medium prismatic structure; very firm; many prominent grayish brown (2.5Y 5/2) clay films on faces of peds; many distinct light brownish gray (2.5Y 6/2) clay depletions on faces of peds; common extremely weakly cemented iron-manganese accumulations; common manganese coatings on vertical faces of peds; brittle; strongly acid; gradual smooth boundary.

Btx2—35 to 55 inches; yellowish brown (10YR 5/6), dark yellowish brown (10YR 4/4), and light brownish gray (2.5Y 6/2) silty clay loam; moderate very coarse and medium prismatic structure; very firm; many distinct grayish brown (2.5Y 5/2) and brown (10YR 5/3) clay films on vertical and horizontal faces of peds; few manganese coatings on vertical faces of peds; brittle; strongly acid; gradual smooth boundary.

Btx3—55 to 67 inches; yellowish brown (10YR 5/4) silt loam; weak very coarse prismatic structure; very firm; few distinct grayish brown (2.5Y 5/2) clay films on faces of peds; many coarse distinct light brownish gray (2.5Y 6/2) iron depletions; common manganese coatings on vertical faces of peds; brittle; moderately acid; gradual smooth boundary.

Btx4—67 to 80 inches; yellowish brown (10YR 5/4) silt loam; weak very coarse prismatic structure; firm; common medium prominent light olive gray (5Y 6/2) iron depletions; common manganese coatings in some vertical cracks and in old root channels; brittle; moderately acid.

Range in Characteristics

Depth to the fragipan: 20 to 36 inches
Depth to the base of the argillic horizon: 50 to more than 80 inches
Thickness of the loess: 7 to more than 12 feet
Particle-size control section: Averages 18 to 33 percent clay and 2 to 10 percent sand

Ap horizon:
Hue—10YR
Value—4 or 5 (6 or 7 dry)
Chroma—2 to 4
Texture—typically silt loam; silty clay loam in some pedons in severely eroded areas
Reaction—very strongly acid to neutral

E horizon (if it occurs):
Hue—10YR
Value—4 or 5 (6 or 7 dry)
Chroma—2 to 6
Texture—silt loam
Reaction—very strongly acid to moderately acid

Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—silt loam or silty clay loam
Reaction—very strongly acid or strongly acid

Bt/E horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—2 to 6
Texture—silt loam (Bt); silt (E)
Reaction—very strongly acid or strongly acid

Btx horizon:

Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6
Chroma—2 to 6
Texture—silt loam or silty clay loam
Reaction—very strongly acid to moderately acid

Houghton Series

Taxonomic classification: Euic, mesic Typic Haplosaprists

Typical Pedon

Houghton muck, in a wooded swamp on a flood plain at an elevation of about 364 feet above mean sea level; 100 feet north and 80 feet west of the southeast corner of sec. 11, T. 5 S., R. 10 E.; White County, Illinois; USGS Maunie, Illinois, topographic quadrangle; lat. 38 degrees 05 minutes 48 seconds N. and long. 88 degrees 03 minutes 39 seconds W.; UTM Zone 16, Easting 406986, Northing 4217070; NAD 83:

Oa1—0 to 25 inches; black (N 2.5/) sapric material; about 10 percent fiber, a trace rubbed; weak fine subangular blocky structure; friable; many fine and very fine roots; neutral; clear smooth boundary.

Oa2—25 to 30 inches; black (10YR 2/1) sapric material; about 15 percent fiber, less than 3 percent rubbed; moderate medium subangular blocky structure; friable; common coarse woody fragments; few fine and very fine roots; neutral; clear smooth boundary.

Oa3—30 to 60 inches; very dark brown (10YR 2/2) sapric material; about 20 percent fiber, less than 5 percent rubbed; massive; friable; common coarse woody fragments; few fine and very fine roots; neutral.

Range in Characteristics

Oa horizon:

Hue—5YR, 7.5YR, 10YR, or N
Value—2 to 3
Chroma—0 to 3
Texture—muck (sapric material); thin layers of peat (hemic material) in some pedons
Reaction—moderately acid to slightly alkaline
Other characteristics—coprogenous material or marly material below a depth of 51 inches in some pedons

Hoyleton Series

Taxonomic classification: Fine, smectitic, mesic Aquollic Hapludalfs

Typical Pedon

Hoyleton silt loam, on a slope of 2 percent in a cultivated field at an elevation of about 655 feet above mean sea level; 295 feet south and 2,160 feet east of the northwest corner of sec. 15, T. 9 N., R. 5 E.; Shelby County, Illinois; USGS Shumway, Illinois, topographic quadrangle; lat. 39 degrees 13 minutes 46.1 seconds N. and long. 88 degrees 37 minutes 48.4 seconds W.; UTM Zone 16, Easting 359299, Northing 4343508; NAD 83:

Ap—0 to 8 inches; dark brown (10YR 3/3) and very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; many very fine roots; few fine distinct spherical weakly cemented black (10YR 2/1) iron-

manganese concretions with sharp boundaries throughout and few fine distinct spherical weakly cemented black (10YR 2/1) manganese masses with sharp boundaries throughout; moderately acid; abrupt smooth boundary.

E—8 to 11 inches; brown (10YR 5/3) silt loam; weak thin platy structure; friable; common very fine and few fine roots; common faint dark grayish brown (10YR 4/2) organic stains lining root channels and pores; few fine distinct spherical weakly cemented black (10YR 2/1) iron-manganese concretions with sharp boundaries throughout and few fine distinct spherical weakly cemented black (10YR 2/1) manganese masses with sharp boundaries throughout; strongly acid; clear smooth boundary.

BEt—11 to 14 inches; brown (10YR 5/3) silty clay loam; weak fine subangular blocky structure; friable; few very fine roots; few faint grayish brown (10YR 5/2) clay films and few distinct very pale brown (10YR 7/3) silt coatings on faces of peds; few fine distinct yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; few fine distinct spherical weakly cemented black (10YR 2/1) iron-manganese concretions with sharp boundaries throughout and few fine distinct spherical weakly cemented black (10YR 2/1) manganese masses with sharp boundaries throughout; strongly acid; clear smooth boundary.

Bt1—14 to 20 inches; brown (10YR 5/3) silty clay loam; strong fine subangular blocky structure; firm; few very fine roots; many distinct grayish brown (10YR 5/2) clay films and many prominent very pale brown (10YR 8/2) silt coatings on faces of peds; common medium prominent yellowish red (5YR 5/6 and 5/8) masses of oxidized iron in the matrix; few fine distinct spherical weakly cemented black (10YR 2/1) iron-manganese concretions with sharp boundaries throughout; strongly acid; clear smooth boundary.

Bt2—20 to 33 inches; brown (10YR 5/3) silty clay; moderate medium subangular blocky structure; firm; few fine and very fine roots; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; few distinct dark gray (10YR 4/1) clay films lining root channels and pores; common fine prominent yellowish red (5YR 5/8) masses of oxidized iron and common medium faint light brownish gray (2.5Y 6/2) iron depletions in the matrix; common fine distinct spherical weakly cemented black (10YR 2/1) iron-manganese concretions with sharp boundaries throughout; strongly acid; gradual smooth boundary.

2Bt3—33 to 39 inches; pale brown (10YR 6/3) silty clay loam; weak coarse subangular blocky structure; firm; few fine and very fine roots; few faint grayish brown (10YR 5/2) clay films on faces of peds; few faint very dark grayish brown (10YR 3/2) organoargillans lining root channels and pores; many medium prominent yellowish brown (10YR 5/8) masses of oxidized iron and common medium faint light brownish gray (2.5Y 6/2) iron depletions in the matrix; common fine distinct spherical weakly cemented black (10YR 2/1) iron-manganese concretions with sharp boundaries throughout; about 10 percent fine sand; strongly acid; gradual smooth boundary.

2BCt—39 to 54 inches; pale brown (10YR 6/3) silt loam; massive; friable; few very fine roots; few faint dark gray (10YR 4/1) clay films lining root channels and pores; few fine prominent yellowish brown (10YR 5/8) masses of oxidized iron and few fine faint yellowish brown (10YR 5/4) masses of oxidized iron and manganese in the matrix; common medium faint grayish brown (2.5Y 5/2) iron depletions in the matrix; common fine prominent spherical weakly cemented black (10YR 2/1) iron-manganese concretions with sharp boundaries throughout; about 15 percent fine sand; slightly acid; gradual smooth boundary.

2Cg—54 to 80 inches; brown (7.5YR 5/2) silt loam; massive; friable; many medium prominent strong brown (7.5YR 4/6) masses of oxidized iron and many medium

distinct brown (7.5YR 4/4) masses of oxidized iron and manganese in the matrix; few fine distinct spherical weakly cemented black (10YR 2/1) iron-manganese concretions with sharp boundaries throughout; about 25 percent fine sand; slightly acid.

Range in Characteristics

Thickness of the dark surface layer: 7 to 9 inches
Thickness of the loess: 30 to 55 inches
Depth to the base of the argillic horizon: More than 36 inches
Depth to carbonates: More than 60 inches
Particle-size control section: Averages 35 to 45 percent clay and less than 7 percent fine sand or coarser material

Ap or A horizon:
Hue—10YR
Value—2 to 3
Chroma—1 to 3
Texture—silt loam
Content of rock fragments—none
Reaction—very strongly acid to moderately acid, except in areas that have been limed

E, EB, or BE horizon (if it occurs):
Hue—10YR
Value—4 to 6
Chroma—3 or 4
Texture—silt loam
Content of rock fragments—none
Reaction—very strongly acid to moderately acid, except in areas that have been limed

Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—2 to 4
Texture—silty clay loam or silty clay
Content of rock fragments—none
Reaction—very strongly acid or strongly acid

2BC horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—1 to 4
Texture—silt loam, loam, silty clay loam, or clay loam
Content of rock fragments—0 to 10 percent
Reaction—strongly acid to slightly acid

2Cg or 2C horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—5 or 6
Chroma—1 to 4
Texture—silty clay loam, clay loam, or silt loam
Content of rock fragments—0 to 10 percent by volume
Reaction—moderately acid to neutral

Kell Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Ultic Hapludalfs

Typical Pedon

Kell silt loam, in a wooded area of Hickory-Kell silt loams, 18 to 35 percent slopes, at an elevation of about 460 feet above sea level; 1,975 feet west and 1,175 feet north of the southeast corner of sec. 15, T. 3 S., R. 3 E.; Jefferson County, Illinois; USGS Opdyke, Illinois, topographic quadrangle; lat. 38 degrees 15 minutes 39 seconds N. and long. 88 degrees 51 minutes 28 seconds W.; UTM Zone 16, Easting 337457, Northing 4236400; NAD 83:

A—0 to 3 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate medium granular structure; friable; common very fine and fine roots throughout; moderately acid; abrupt smooth boundary.

E—3 to 7 inches; 60 percent dark grayish brown (10YR 4/2) and 40 percent dark yellowish brown (10YR 4/4) silt loam; weak thin platy structure; friable; common very fine and fine roots; few fine distinct spherical black (10YR 2/1) iron-manganese concretions throughout; 1 percent shale pebbles; 1 percent subrounded quartz pebbles; moderately acid; clear smooth boundary.

Bt1—7 to 13 inches; yellowish brown (10YR 5/4) silt loam; strong fine subangular blocky structure; friable; common fine and medium roots; few distinct brown (10YR 4/3) clay films on faces of peds; few fine faint dark brown (10YR 4/3) masses of oxidized iron on faces of peds; common fine distinct spherical black (10YR 2/1) iron-manganese concretions throughout; 1 percent shale pebbles; 1 percent subrounded quartz pebbles; moderately acid; clear smooth boundary.

2Bt2—13 to 18 inches; yellowish brown (10YR 5/4) silty clay loam; moderate fine subangular blocky structure; friable; few medium roots between peds; many distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; many fine distinct irregular yellowish brown (10YR 5/8) masses of oxidized iron with clear boundaries on faces of peds; few fine distinct spherical black (10YR 2/1) iron-manganese concretions throughout; 1 percent shale pebbles; 1 percent subrounded quartz pebbles; very strongly acid; clear smooth boundary.

2Bt3—18 to 25 inches; yellowish brown (10YR 5/6) silty clay loam; moderate medium subangular blocky structure; firm; few medium roots between peds; few distinct yellowish brown (10YR 5/4) clay films on faces of peds; few fine distinct irregular yellowish brown (10YR 5/8) masses of oxidized iron with clear boundaries on faces of peds; few fine distinct spherical black (10YR 2/1) iron-manganese concretions throughout; 10 percent shale pebbles; 1 percent subrounded quartz pebbles; very strongly acid; clear smooth boundary.

2BC—25 to 35 inches; 50 percent yellowish brown (10YR 5/4) and 50 percent light brownish gray (2.5Y 6/2) very channery silty clay loam; weak coarse prismatic structure; firm; few medium roots in cracks; few fine prominent irregular yellowish brown (10YR 5/8) and reddish yellow (7.5YR 6/6) masses of oxidized iron with clear boundaries around rock fragments; 50 percent shale fragments; extremely acid; gradual wavy boundary.

3Cr—35 to 60 inches; 50 percent yellowish brown (10YR 5/4) and 50 percent light brownish gray (2.5Y 6/2), weathered shale bedrock; few fine prominent irregular yellowish brown (10YR 5/8) and reddish yellow (7.5YR 6/6) masses of oxidized iron with clear boundaries around rock fragments.

Range in Characteristics

Depth to bedrock: 20 to 40 inches

A horizon:
Hue—10YR

Value—3 to 5
Chroma—2 to 4
Texture—silt loam, silty clay loam, loam, or clay loam
Content of rock fragments—0 to 15 percent
Reaction—very strongly acid to moderately acid

E horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam, silty clay loam, loam, or clay loam
Content of rock fragments—0 to 15 percent
Reaction—very strongly acid to moderately acid

Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Texture—silt loam or silty clay loam
Content of rock fragments—0 to 15 percent
Reaction—very strongly acid to moderately acid

2Bt horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6
Chroma—2 to 8
Texture—silt loam, silty clay loam, loam, or clay loam or the channery or very channery analogs of these textures
Content of rock fragments—0 to 60 percent
Reaction—extremely acid to moderately acid

2BC horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6
Chroma—2 to 8
Texture—silt loam, silty clay loam, loam, or clay loam or the channery or very channery analogs of these textures
Content of rock fragments—5 to 60 percent
Reaction—extremely acid to moderately acid

Landes Series

Taxonomic classification: Coarse-loamy, mixed, superactive, mesic Fluventic Hapludolls

Typical Pedon

Landes very fine sandy loam, in a gently sloping area in a cultivated field at an elevation of about 400 feet above mean sea level; approximately 1,740 feet south and 2,800 feet west of the intersection of railroad tracks and Steppig Road, sec. 25, T. 1 S., R. 11 W.; Monroe County, Illinois; USGS Oakville, Missouri-Illinois, topographic quadrangle; lat. 38 degrees 24 minutes 57 seconds N. and long. 90 degrees 16 minutes 02 seconds W.; UTM Zone 15, Easting 738590, Northing 4255491; NAD 83:

Ap—0 to 10 inches; very dark gray (10YR 3/1) very fine sandy loam, dark grayish brown (10YR 4/2) dry; moderate fine granular structure; friable; many very fine and few fine roots; few very fine tubular pores; slightly acid; abrupt smooth boundary.

A—10 to 14 inches; very dark gray (10YR 3/1) very fine sandy loam, dark grayish brown (10YR 4/2) dry; moderate fine subangular blocky structure; very friable; common very fine and few fine roots; common very fine and fine tubular pores; common faint black (10YR 2/1) organic stains on faces of peds; neutral; clear smooth boundary.

AB—14 to 18 inches; dark brown (10YR 3/3) very fine sandy loam, brown (10YR 5/3) dry; weak fine subangular blocky structure; very friable; common very fine roots and few fine roots; few very fine tubular pores; few distinct black (10YR 2/1) organic stains on faces of peds; neutral; clear smooth boundary.

Bw1—18 to 30 inches; brown (10YR 4/3) very fine sandy loam; weak fine subangular blocky structure; very friable; few very fine and fine roots; common very fine and fine tubular pores; few faint dark brown (10YR 3/3) organoargillans on faces of peds; neutral; gradual smooth boundary.

Bw2—30 to 39 inches; brown (10YR 4/3) very fine sandy loam; weak medium subangular blocky structure; very friable; few very fine and fine roots; few very fine tubular pores; few distinct brown (10YR 4/3) clay films in root channels and in pores; neutral; gradual smooth boundary.

BC—39 to 47 inches; brown (10YR 4/3) loamy very fine sand; weak medium subangular blocky structure; very friable; few very fine roots; slightly acid; clear smooth boundary.

C—47 to 80 inches; brown (10YR 5/3) very fine sand; single grain; loose; few very fine roots; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches

Depth to the base of the cambic horizon: 22 to 40 inches

Particle-size control section: 50 to 90 percent sand; the sand is dominantly fine or very fine

Ap, A, and/or AB horizon:

Hue—10YR
Value—2 to 3
Chroma—1 to 3
Texture—fine sandy loam, very fine sandy loam, or sandy loam
Reaction—moderately acid to neutral

Bw horizon:

Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—loam, fine sandy loam, very fine sandy loam, sandy loam, loamy fine sand, or loamy very fine sand; stratified in many pedons
Content of rock fragments—0 to 10 percent fine gravel
Reaction—moderately acid to slightly alkaline

BC and/or C horizon:

Hue—2.5YR, 5YR, 7.5YR, or 10YR
Value—4 to 6
Chroma—1 to 4
Texture—sand, fine sand, very fine sand, loamy sand, loamy fine sand, loamy very fine sand, sandy loam, fine sandy loam, very fine sandy loam, loam, or silt loam; stratified in many pedons
Content of rock fragments—0 to 10 percent fine gravel
Reaction—moderately acid to moderately alkaline

Marissa Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Argiaquic Argialbolls

Typical Pedon

Marissa silt loam, in a cultivated field on a stream terrace at an elevation of about 380 feet above mean sea level; 1,740 feet north and 150 feet west of the southeast corner of sec. 11, T. 8 S., R. 8 E.; Gallatin County, Illinois; USGS Ridgway, Illinois, topographic quadrangle; lat. 37 degrees 50 minutes 24 seconds N. and long. 88 degrees 16 minutes 56 seconds W.; UTM Zone 16, Easting 387184, Northing 4188852; NAD 83:

A—0 to 12 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; weak fine granular structure; friable; neutral; clear smooth boundary.

Eg—12 to 18 inches; dark gray (10YR 4/1) silt loam; weak medium platy structure parting to weak fine granular; friable; slightly acid; clear smooth boundary.

BEg—18 to 22 inches; grayish brown (10YR 5/2) silty clay loam; weak medium subangular blocky structure parting to weak medium granular; firm; many fine distinct yellowish brown (10YR 5/4) extremely weakly cemented iron-manganese accumulations in the matrix; neutral; clear smooth boundary.

Btg1—22 to 35 inches; grayish brown (2.5Y 5/2) silty clay loam; weak coarse prismatic structure parting to strong fine and medium subangular blocky; firm; common distinct dark gray (10YR 4/1) clay films; common fine distinct light olive brown (2.5Y 5/4) masses of extremely weakly cemented iron-manganese accumulations; few medium prominent black (10YR 2/1) iron-manganese concretions; neutral; clear smooth boundary.

Btg2—35 to 43 inches; dark grayish brown (2.5Y 4/2) silty clay loam; weak medium subangular blocky structure; firm; common distinct dark gray (10YR 4/1) clay films; many fine and medium distinct light olive brown (2.5Y 5/4) extremely weakly cemented iron-manganese accumulations; many medium distinct black (10YR 2/1) iron-manganese concretions; neutral; clear smooth boundary.

C1—43 to 50 inches; light olive brown (2.5Y 5/4) and light yellowish brown (2.5Y 6/4) silt loam; massive; friable; slightly alkaline; clear smooth boundary.

C2—50 to 60 inches; light yellowish brown (2.5Y 6/4) silt loam; massive; friable; many prominent yellowish brown (10YR 5/8) masses of oxidized iron in the matrix; strongly effervescent; moderately alkaline.

Range in Characteristics

Depth to the top of the argillic horizon: 14 to 24 inches
Depth of soil development: Typically 40 to 55 inches; ranges to 65 inches
Depth to carbonates: 40 to 60 inches

Ap or A horizon:
Hue—10YR
Value—2 to 3
Chroma—1 or 2
Texture—silt loam
Reaction—slightly acid or neutral

Eg horizon:
Hue—10YR
Value—4 or 5
Chroma—1 or 2
Texture—silt loam
Reaction—slightly acid or neutral

BEg, Btg, or Bt horizon:
Hue—10YR or 2.5Y

Value—4 to 6
Chroma—2 or 3
Texture—silty clay loam
Reaction—slightly acid or neutral

C or Cg horizon:
Hue—2.5Y
Value—5 or 6
Chroma—3 or 4
Texture—silt loam or silty clay loam
Reaction—slightly alkaline or moderately alkaline

Markland Series

Taxonomic classification: Fine, mixed, active, mesic Typic Hapludalfs

Typical Pedon

Markland silt loam, on a slope of 46 percent in a forested area at an elevation of about 400 feet above mean sea level; 1,200 feet east and 1,650 feet south of the northwest corner of sec. 22, T. 5 S., R. 1 W.; Perry County, Indiana; USGS Derby, Indiana, topographic quadrangle; lat. 38 degrees 04 minutes 08 seconds N. and long. 86 degrees 30 minutes 35 seconds W.; UTM Zone 16, Easting 543007, Northing 4213578; NAD 83:

A—0 to 4 inches; dark grayish brown (10YR 4/2) silt loam, pale brown (10YR 6/3) dry; moderate fine and medium subangular blocky structure; friable; many fine and medium roots; slightly acid; clear wavy boundary.

2Bt1—4 to 15 inches; yellowish brown (10YR 5/6) silty clay; strong medium angular blocky structure; firm; common fine and medium roots between peds; common distinct yellowish brown (10YR 5/4) clay films on faces of peds; strongly acid; clear wavy boundary.

2Bt2—15 to 28 inches; yellowish brown (10YR 5/6) silty clay; strong medium angular blocky structure; firm; common fine and medium roots between peds; common distinct yellowish brown (10YR 5/4) clay films on faces of peds; neutral; clear smooth boundary.

2Btk1—28 to 38 inches; yellowish brown (10YR 5/6) silty clay; strong fine subangular blocky structure; firm; few fine roots between peds; common distinct brown (10YR 5/3) clay films on faces of peds; few fine prominent white (10YR 8/1) carbonate nodules; strongly effervescent; moderately alkaline; clear wavy boundary.

2Btk2—38 to 48 inches; yellowish brown (10YR 5/6) silty clay loam; strong fine subangular blocky structure; firm; few fine roots between peds; common distinct brown (10YR 5/3) clay films on faces of peds; many fine and medium prominent white (10YR 8/1) carbonate nodules; strongly effervescent; moderately alkaline; clear wavy boundary.

2Btk3—48 to 59 inches; yellowish brown (10YR 5/6) silty clay loam; strong fine subangular blocky structure; firm; few fine roots between peds; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; many fine and medium prominent white (10YR 8/1) carbonate nodules; strongly effervescent; moderately alkaline; clear wavy boundary.

2BCtk—59 to 80 inches; stratified, 90 percent yellowish brown (10YR 5/6) silty clay loam and 10 percent yellowish brown (10YR 5/6) silty clay; weak fine subangular blocky structure; friable; few fine roots between peds; few distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; many fine prominent white (10YR 8/1) carbonate nodules; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess: 3 to 18 inches
Depth to carbonates: Typically 20 to 40 inches; ranges to less than 20 inches in severely eroded areas
Depth to the base of the argillic horizon: 30 to 70 inches
Particle-size control section: Averages 40 to 55 percent clay and 2 to 5 percent fine sand or coarser material

A horizon:
Hue—10YR
Value—3 or 4
Chroma—1 to 3
Texture—silt loam or silty clay loam
Reaction—strongly acid to neutral

Ap horizon (if it occurs):
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam or silty clay loam
Reaction—strongly acid to neutral

Bt horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silty clay loam
Reaction—very strongly acid to moderately acid

2Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silty clay loam or silty clay
Reaction—very strongly acid to slightly alkaline

2Btk horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silty clay loam or silty clay
Reaction—slightly alkaline or moderately alkaline

2BCtk horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silty clay loam, silty clay, or silt loam; commonly stratified
Reaction—slightly alkaline or moderately alkaline

McGary Series

Taxonomic classification: Fine, mixed, active, mesic Aeric Epiaqualfs

Typical Pedon

McGary silt loam, on a nearly level lake plain in a cultivated field at an elevation of about 480 feet above mean sea level; 2,050 feet east and 700 feet north of the southwest corner of sec. 24, T. 6 N., R. 7 W.; Greene County, Indiana; USGS Sandborn, Indiana, topographic quadrangle; lat. 38 degrees 56 minutes 21 seconds N. and long. 87 degrees 08 minutes 30 seconds W.; UTM Zone 16, Easting 487722, Northing 4310041; NAD 83:

Ap—0 to 11 inches; dark grayish brown (10YR 4/2) silt loam, light gray (10YR 7/2) dry; weak coarse subangular blocky structure parting to moderate fine and medium granular; friable; neutral; abrupt smooth boundary.

2Bt—11 to 15 inches; brown (10YR 5/3) silty clay; moderate medium subangular blocky structure; firm; many faint grayish brown (10YR 5/2) clay films on faces of peds; common fine distinct gray (10YR 6/1) iron depletions in the matrix; moderately acid; clear smooth boundary.

2Btg1—15 to 22 inches; grayish brown (10YR 5/2) silty clay; weak fine and medium prismatic structure parting to moderate medium angular blocky; firm; many distinct gray (10YR 5/1) clay films on faces of peds; common fine distinct yellowish brown (10YR 5/4) masses of oxidized iron in the matrix; few fine distinct black (10YR 2/1) iron-manganese concretions; neutral; clear smooth boundary.

2Btg2—22 to 27 inches; grayish brown (10YR 5/2) silty clay; moderate medium prismatic structure parting to moderate medium angular blocky; firm; many distinct gray (10YR 5/1) clay films on faces of peds; common fine distinct yellowish brown (10YR 5/4) masses of oxidized iron in the matrix; slightly effervescent in places; slightly alkaline; gradual irregular boundary.

2Btg3—27 to 42 inches; gray (10YR 5/1) silty clay; moderate medium prismatic structure parting to moderate medium angular blocky; firm; common distinct gray (10YR 6/1) clay films on faces of peds; common fine distinct light yellowish brown (10YR 6/4) masses of oxidized iron in the matrix; few fine and medium distinct white (10YR 8/1) weakly cemented carbonate nodules; slightly effervescent; slightly alkaline; clear irregular boundary.

2BCtkg—42 to 50 inches; gray (10YR 6/1) silty clay; weak coarse angular blocky structure; firm; few faint gray (10YR 5/1) clay films on faces of peds; common fine prominent yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; common fine and medium distinct white (10YR 8/1) weakly cemented carbonate nodules; strongly effervescent; moderately alkaline; gradual wavy boundary.

2Cg—50 to 60 inches; gray (10YR 6/1), stratified silty clay loam and silty clay; massive; firm; common fine prominent yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; common fine and medium distinct white (10YR 8/1) weakly cemented carbonate nodules; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess: 0 to 20 inches
Depth to carbonates: 22 to 56 inches
Depth to the base of the argillic horizon: 24 to 50 inches
Particle-size control section: Averages 40 to 50 percent clay and 2 to 6 percent sand

Ap or A horizon:
Hue—10YR
Value—3 to 5
Chroma—1 to 4
Texture—silt loam or silty clay loam
Reaction—moderately acid to neutral

Bt, Btg, 2Bt, or 2Btg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 6
Texture—silty clay or silty clay loam
Reaction—very strongly acid to neutral in the upper part; neutral or slightly alkaline in the lower part

2BCtkg, 2BCg, or 2BC horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 6
Texture—commonly silty clay or silty clay loam; less commonly clay
Reaction—neutral to moderately alkaline

2C or 2Cg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 6
Texture—commonly stratified silty clay and silty clay loam; less commonly thin strata of clay and silt loam
Reaction—slightly alkaline or moderately alkaline

Meadowbank Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Argiudolls

Typical Pedon

Meadowbank silt loam, on a nearly level terrace summit in a cultivated field at an elevation of about 392 feet above mean sea level; 180 feet east and 740 feet north of the southwest corner of sec. 22, T. 5 S., R. 10 E.; White County, Illinois; USGS Maunie, Illinois, topographic quadrangle; lat. 38 degrees 04 minutes 10 seconds N. and long. 88 degrees 05 minutes 49 seconds W.; UTM Zone 16, Easting 403785, Northing 4214088; NAD 83:

Ap—0 to 8 inches; very dark brown (10YR 2/2) silt loam, brown (10YR 5/3) dry; moderate fine granular structure; friable; few very fine roots; neutral; abrupt smooth boundary.

A—8 to 19 inches; very dark grayish brown (10YR 3/2) silt loam, brown (10YR 5/3) dry; moderate fine subangular blocky structure; friable; few very fine roots; neutral; clear smooth boundary.

Bt1—19 to 26 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; friable; few very fine roots; many distinct very dark grayish brown (10YR 3/2) clay films on faces of peds; neutral; clear smooth boundary.

Bt2—26 to 36 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few very fine roots; many distinct dark brown (10YR 3/3) clay films on faces of peds; neutral; clear smooth boundary.

2Bt3—36 to 45 inches; brown (7.5YR 4/4) loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; few very fine roots; common distinct dark brown (7.5YR 3/4) clay films on faces of peds; neutral; clear smooth boundary.

2Bt4—45 to 49 inches; strong brown (7.5YR 4/6) sandy loam; weak medium subangular blocky structure; friable; common distinct dark brown (7.5YR 3/4) clay films on faces of peds; slightly acid; clear smooth boundary.

2E and Bt—49 to 80 inches; light yellowish brown (10YR 6/4) sand (E); strong brown (7.5YR 4/6) and yellowish brown (10YR 5/4) lamellae of sandy loam and loamy sand (Bt); single grain and loose (E); weak coarse subangular blocky structure and very friable (Bt); common distinct dark brown (7.5YR 3/4) clay bridges (Bt); individual lamellae are 1/2 inch to 3 inches thick; combined thickness of the lamellae is about 10 inches; slightly acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 19 inches
Thickness of the loess: 24 to 40 inches
Thickness of the series control section: 50 to more than 80 inches
Depth to carbonates: 72 inches or more
Content of rock fragments: Less than 10 percent

Ap and A horizons:
Hue—10YR
Value—2 to 3
Chroma—2 or 3
Texture—silt loam
Reaction—strongly acid to neutral

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Texture—silty clay loam
Reaction—strongly acid to neutral

2Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Texture—clay loam, loam, or sandy loam
Reaction—very strongly acid to neutral

2E and Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 6
Texture—sand, loamy sand, or sandy loam
Reaction—strongly acid to neutral

Montgomery Series

Taxonomic classification: Fine, mixed, active, mesic Vertic Endoaquolls
Taxadjunct features: The Montgomery soils in this survey area have smectitic clay mineralogy rather than the mixed mineralogy that is defined for the series. This difference, however, does not significantly affect the use and management of the soils. These soils are classified as fine, smectitic, mesic Vertic Endoaquolls.

Typical Pedon

Montgomery silty clay loam, in a slight depression in a cultivated field at an elevation of about 480 feet above mean sea level; 2,500 feet west and 380 feet north of the southeast corner of sec. 26, T. 6 N., R. 7 W.; Greene County, Indiana; USGS Sandborn, Indiana, topographic quadrangle; lat. 38 degrees 55 minutes 25 seconds

N. and long. 87 degrees 09 minutes 25 seconds W.; UTM Zone 16, Easting 486384, Northing 4308319; NAD 83:

Ap—0 to 11 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; weak medium subangular blocky structure; friable; slightly acid; abrupt smooth boundary.

A—11 to 15 inches; black (10YR 2/1) silty clay, dark gray (10YR 4/1) dry; moderate medium angular blocky structure; firm; neutral; clear wavy boundary.

Bg1—15 to 24 inches; dark gray (10YR 4/1) silty clay; weak coarse prismatic structure parting to moderate coarse angular blocky; firm; common faint dark gray (10YR 4/1) pressure faces on peds; common fine distinct brown (10YR 5/3) masses of oxidized iron in the matrix; common fine distinct black (10YR 2/1) iron-manganese concretions; krotovinas of dark gray (10YR 4/1) silty clay, 1 to 2 inches in diameter and 8 to 12 inches apart, extend vertically throughout; neutral; gradual irregular boundary.

Bg2—24 to 29 inches; grayish brown (2.5Y 5/2) silty clay; weak coarse prismatic structure parting to moderate medium and coarse angular blocky; firm; common distinct gray (10YR 5/1) pressure faces on peds; common fine distinct yellowish brown (10YR 5/4) masses of oxidized iron in the matrix; common fine prominent black (10YR 2/1) iron-manganese concretions; krotovinas of gray (10YR 5/1) silty clay, 1 to 2 inches in diameter and 8 to 12 inches apart, extend vertically throughout; slightly effervescent; slightly alkaline; gradual smooth boundary.

Bg3—29 to 38 inches; gray (10YR 6/1) silty clay loam; weak coarse prismatic structure parting to weak coarse angular blocky; firm; few distinct gray (10YR 5/1) pressure faces on peds; many fine distinct yellowish brown (10YR 5/4) masses of oxidized iron in the matrix; common fine prominent black (10YR 2/1) iron-manganese concretions; few fine calcium carbonate nodules; krotovinas of gray (10YR 5/1) silty clay, 1 to 2 inches in diameter and 8 to 12 inches apart, extend vertically throughout; strongly effervescent; moderately alkaline; gradual smooth boundary.

BCg—38 to 48 inches; gray (10YR 6/1) silty clay loam; weak coarse prismatic structure parting to weak coarse angular blocky; firm; few distinct gray (10YR 5/1) pressure faces on peds; many medium distinct yellowish brown (10YR 5/4) masses of oxidized iron in the matrix; many fine distinct white (10YR 8/1) calcium carbonate nodules; krotovinas of gray (10YR 5/1) silty clay, 1 to 2 inches in diameter and 8 to 12 inches apart, extend vertically throughout; strongly effervescent; moderately alkaline; gradual smooth boundary.

Cg—48 to 60 inches; gray (10YR 5/1) silty clay loam; weak medium and coarse angular blocky structure; firm; many medium prominent yellowish brown (10YR 5/8) masses of oxidized iron in the matrix; many fine distinct white (10YR 8/1) calcium carbonate nodules; krotovinas of gray (10YR 5/1) silty clay, 1 to 2 inches in diameter and 8 to 12 inches apart, extend vertically throughout; strongly effervescent; moderately alkaline.

Range in Characteristics

Depth to the base of the cambic horizon: 30 to 60 inches
Particle-size control section: Averages 40 to 50 percent clay and 2 to 10 percent sand

Ap and A horizons:
Hue—10YR
Value—2 to 3
Chroma—1 or 2
Texture—commonly silty clay loam or silty clay; less commonly silt loam
Reaction—slightly acid or neutral

Bg horizon (upper part):
Hue—10YR, 2.5Y, or 5Y

Value—4 to 6
Chroma—1 or 2
Texture—silty clay
Reaction—slightly acid to slightly alkaline
Calcium carbonate equivalent—0 to 5 percent

Bg horizon (lower part) and BC or BCg horizon (if it occurs):
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 6
Texture—silty clay or silty clay loam
Reaction—slightly alkaline or moderately alkaline
Calcium carbonate equivalent—0 to 30 percent

Cg or C horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 4
Texture—commonly silty clay or silty clay loam or stratified with these textures; thin strata of silt loam in some pedons
Reaction—slightly alkaline or moderately alkaline
Calcium carbonate equivalent—10 to 35 percent

Muren Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Aquic Hapludalfs

Typical Pedon

Muren silt loam, in a gently sloping upland area in a cropped field at an elevation of about 455 feet above mean sea level; approximately 300 feet north and 240 feet east of the center of sec. 35, T. 6 S., R. 9 E.; White County, Illinois; USGS New Haven, Illinois, topographic quadrangle; lat. 37 degrees 57 minutes 35 seconds N. and long. 88 degrees 10 minutes 47 seconds W.; UTM Zone 16, Easting 396358, Northing 4201991; NAD 83:

Ap—0 to 9 inches; brown (10YR 5/3) silt loam, very pale brown (10YR 7/3) dry; moderate fine granular structure; friable; common very fine roots; slightly acid; abrupt smooth boundary.

E—9 to 14 inches; yellowish brown (10YR 5/4) silt loam; moderate thin platy structure; friable; few very fine roots; many distinct white (10YR 8/1) (dry) silt coatings on faces of peds; few fine spherical extremely weakly cemented iron-manganese accumulations; slightly acid; abrupt smooth boundary.

Bt1—14 to 23 inches; strong brown (7.5YR 5/6) silty clay loam; moderate medium prismatic structure parting to moderate fine subangular blocky; firm; few very fine roots; many faint brown (7.5YR 5/4) clay films on faces of peds; common distinct white (10YR 8/1) (dry) silt coatings on faces of peds; few fine spherical extremely weakly cemented iron-manganese accumulations; moderately acid; clear smooth boundary.

Bt2—23 to 35 inches; yellowish brown (10YR 5/6) silty clay loam; moderate medium prismatic structure parting to moderate fine subangular blocky; firm; few very fine roots; common distinct yellowish brown (10YR 5/4) clay films on faces of peds; common distinct white (10YR 8/1) (dry) silt coatings on faces of peds; few fine distinct yellowish brown (10YR 5/8) masses of oxidized iron; common fine prominent grayish brown (10YR 5/2) iron depletions; few fine spherical extremely weakly cemented iron-manganese accumulations; strongly acid; clear smooth boundary.

Bt3—35 to 51 inches; yellowish brown (10YR 5/6) silty clay loam; weak medium prismatic structure; firm; few distinct yellowish brown (10YR 5/4) clay films on faces of peds; very few distinct white (10YR 8/1) (dry) silt coatings on faces of peds; common fine prominent light brownish gray (10YR 6/2) iron depletions; common fine distinct yellowish brown (10YR 5/8) masses of oxidized iron; common fine and medium spherical iron-manganese concretions; moderately acid; gradual smooth boundary.

C—51 to 80 inches; yellowish brown (10YR 5/6) silt loam; massive; friable; many medium prominent light brownish gray (10YR 6/2) iron depletions and common medium distinct strong brown (7.5YR 5/8) masses of oxidized iron; common fine and medium spherical iron-manganese concretions; slightly acid.

Range in Characteristics

Depth to the base of the argillic horizon: 30 to 70 inches
Depth to carbonates: More than 80 inches
Series control section: Averages less than 7 percent sand and contains no rock fragments

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam; silty clay loam in some pedons in severely eroded areas
Reaction—strongly acid to slightly acid in areas that have not been limed; ranges to neutral in areas that have been limed

E horizon (if it occurs):
Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—silt loam or silt
Reaction—strongly acid to slightly acid

Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—silty clay loam or silt loam
Reaction—very strongly acid to moderately acid

C horizon:
Hue—7.5YR or 10YR
Value—4 to 7
Chroma—3 to 6
Texture—silt loam or silt
Reaction—very strongly acid to neutral

Navlys Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Navlys silty clay loam, on a strongly sloping backslope in a pasture at an elevation of about 540 feet above mean sea level; approximately 1,300 feet south and 700 feet west of the northeast corner of sec. 28, T. 4 N., R. 8 W.; Madison County, Illinois; USGS Edwardsville, Illinois, topographic quadrangle; lat. 38 degrees 45 minutes 36

seconds N. and long. 89 degrees 59 minutes 43 seconds W.; UTM Zone 16, Easting 239734, Northing 4294405; NAD 83:

Ap—0 to 5 inches; dark yellowish brown (10YR 4/4) silty clay loam, light yellowish brown (10YR 6/4) dry; moderate fine subangular blocky structure; friable; many very fine and common fine roots; slightly acid; abrupt smooth boundary.

Bt1—5 to 16 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; firm; many very fine and few fine roots; many distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; common fine distinct strong brown (7.5YR 4/6) masses of oxidized iron in the matrix; few fine prominent irregular black (7.5YR 2.5/1) extremely weakly cemented iron-manganese accumulations; moderately acid; clear smooth boundary.

Bt2—16 to 26 inches; yellowish brown (10YR 5/4) silty clay loam; weak medium subangular blocky structure; friable; common very fine and few fine roots; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; common fine and medium distinct light brownish gray (10YR 6/2) iron depletions and common fine distinct strong brown (7.5YR 4/6) masses of oxidized iron in the matrix; common fine and medium prominent irregular black (7.5YR 2.5/1) extremely weakly cemented iron-manganese accumulations; moderately acid; clear smooth boundary.

BC—26 to 34 inches; yellowish brown (10YR 5/4) silt loam; weak coarse subangular blocky structure; friable; few very fine roots; few prominent brown (10YR 4/3) clay films lining vertical channels; common fine and medium distinct light brownish gray (10YR 6/2) iron depletions and common medium and coarse distinct strong brown (7.5YR 4/6) masses of oxidized iron in the matrix; common fine and medium prominent irregular black (7.5YR 2.5/1) extremely weakly cemented iron-manganese accumulations; slightly effervescent; slightly alkaline; clear smooth boundary.

C1—34 to 44 inches; light brownish gray (2.5Y 6/2) silt loam; massive; very friable; few very fine roots; few prominent brown (10YR 4/3) clay films lining vertical channels; many coarse prominent yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; few fine and medium prominent irregular black (7.5YR 2.5/1) extremely weakly cemented iron-manganese accumulations; strongly effervescent; slightly alkaline; clear smooth boundary.

C2—44 to 68 inches; light brownish gray (2.5Y 6/2) silt loam; massive; very friable; few very fine roots; common medium and coarse prominent yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; few fine prominent irregular very dark brown (7.5YR 2.5/2) extremely weakly cemented iron-manganese accumulations; common medium and coarse faint light gray (10YR 7/2) carbonate concretions; strongly effervescent; slightly alkaline; gradual smooth boundary.

C3—68 to 80 inches; light olive brown (2.5Y 5/3) silt loam; massive; very friable; common fine and medium prominent strong brown (7.5YR 4/6) masses of oxidized iron in the matrix; few fine prominent irregular dark brown (7.5YR 3/2) extremely weakly cemented iron-manganese accumulations; strongly effervescent; slightly alkaline.

Range in Characteristics

Depth to carbonates: 22 to 40 inches
Depth to the base of the argillic horizon: 22 to 40 inches
Thickness of the loess: 80 inches or more
Particle-size control section: Averages between 25 and 35 percent clay
Other characteristics: Some pedons have a BE horizon.

Ap or A horizon:
Hue—10YR

Value—3 to 5
Chroma—2 to 4
Texture—silty clay loam or silt loam
Reaction—moderately acid to neutral

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—typically silty clay loam; subhorizons of silt loam in some pedons
Reaction—moderately acid to slightly alkaline

BC horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—typically silt loam; silty clay loam in some pedons
Reaction—moderately acid to slightly alkaline

C horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 6
Texture—silt loam or silt
Reaction—moderately alkaline or slightly alkaline

Negley Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Typic Paleudalfs

Typical Pedon

Negley loam, in a strongly sloping area of mixed hardwoods at an elevation of about 600 feet above mean sea level; 540 feet west and 1,160 feet north of the southeast corner of sec. 4, T. 4 N., R. 5 W.; Madison County, Illinois; USGS Grantfork, Illinois, topographic quadrangle; lat. 38 degrees 49 minutes 10 seconds N. and long. 89 degrees 39 minutes 24 seconds W.; UTM Zone 16, Easting 269353, Northing 4300093; NAD 83:

A—0 to 3 inches; dark grayish brown (10YR 4/2) loam, light brownish gray (10YR 6/2) dry; weak fine granular structure; friable; many very fine and few fine roots; less than 5 percent gravel; moderately acid; clear smooth boundary.
E—3 to 7 inches; yellowish brown (10YR 5/4) loam, very pale brown (10YR 7/4) dry; weak fine granular structure; friable; common very fine and few fine roots; about 10 percent gravel; strongly acid; clear smooth boundary.
Bt1—7 to 12 inches; yellowish red (5YR 5/6) clay loam; moderate coarse subangular blocky structure; firm; common very fine and few fine roots; common distinct reddish brown (5YR 4/4) clay films on faces of peds; about 10 percent gravel; strongly acid; clear smooth boundary.
Bt2—12 to 22 inches; yellowish red (5YR 5/6) clay loam; moderate coarse subangular blocky structure; firm; common very fine and few fine roots; many distinct reddish brown (5YR 4/4) clay films on faces of peds; about 10 percent gravel; strongly acid; clear smooth boundary.
Bt3—22 to 32 inches; yellowish red (5YR 5/6) clay loam; moderate coarse subangular blocky structure; firm; few very fine and fine roots; many distinct reddish brown (5YR 4/4) clay films on faces of peds; about 10 percent gravel; strongly acid; clear smooth boundary.

Bt4—32 to 39 inches; strong brown (7.5YR 5/6) clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few very fine roots; many distinct reddish brown (5YR 4/4) clay films on faces of peds; common medium faint yellowish red (5YR 5/6) masses of oxidized iron in the matrix; about 10 percent gravel; strongly acid; clear smooth boundary.

Bt5—39 to 50 inches; strong brown (7.5YR 5/6) sandy clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few very fine roots; common distinct brown (7.5YR 5/4) clay films on faces of peds; common medium distinct reddish brown (5YR 4/4) and reddish yellow (7.5YR 6/8) masses of oxidized iron in the matrix; about 10 percent gravel; moderately acid; clear smooth boundary.

Bt6—50 to 65 inches; yellowish red (5YR 4/6) gravelly clay loam; moderate coarse subangular blocky structure; firm; few very fine roots; common distinct reddish brown (5YR 4/4) clay films on faces of peds; common medium distinct reddish yellow (7.5YR 6/8) masses of oxidized iron in the matrix; common fine prominent irregular dark brown (7.5YR 3/2) iron-manganese nodules with clear boundaries; about 25 percent gravel; moderately acid; clear smooth boundary.

Bt7—65 to 80 inches; yellowish red (5YR 4/6) gravelly sandy clay loam; weak coarse subangular blocky structure; firm; few very fine roots; few distinct reddish brown (5YR 4/4) clay films on faces of peds; common medium and coarse distinct reddish yellow (7.5YR 6/8) masses of oxidized iron in the matrix; common fine prominent irregular dark brown (7.5YR 3/2) iron-manganese nodules with clear boundaries; about 30 percent gravel; moderately acid.

Range in Characteristics

Thickness of the loess: 0 to 18 inches
Depth to the base of soil development: 80 to 150 inches
Content of rock fragments: 2 to 35 percent in the series control section
Carbonates: In the C horizon, if it occurs
Other characteristics: In some pedons in undisturbed areas in which it is 1 to 5 inches thick, the A horizon has hue of 10YR, value of 2 or 3 (4 or 5 dry), and chroma of 2.

Ap horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam or loam; clay loam in some pedons in eroded areas
Reaction—very strongly acid to moderately acid; ranges to neutral in areas that have been limed

E horizon (if it occurs):
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—2 to 5
Texture—silt loam or loam
Reaction—very strongly acid to moderately acid; ranges to neutral in areas that have been limed

BE or BA horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam, loam, or clay loam or the gravelly analogs of these textures
Reaction—very strongly acid to slightly acid

Bt horizon:
Hue—commonly 5YR or 7.5YR; less commonly 2.5YR
Value—4 or 5
Chroma—3 to 8
Texture—loam, clay loam, sandy clay loam, or sandy clay or the gravelly analogs of these textures
Reaction—very strongly acid to moderately acid

BC horizon (if it occurs):
Hue—5YR, 7.5YR, or 10YR
Value—4 or 5
Chroma—3 to 8
Texture—clay loam, sandy clay loam, or sandy loam or the gravelly analogs of these textures
Reaction—strongly acid to neutral

C horizon (if it occurs):
Hue—10YR
Value—4 or 5
Chroma—3 to 6
Texture—stratified coarse sandy loam, gravelly sand, gravelly sandy loam, and gravelly loamy sand; thin layers of finer textured material in some pedons
Reaction—slightly alkaline or moderately alkaline
Other features—carbonates

Newark Series

Taxonomic classification: Fine-silty, mixed, active, nonacid, mesic Fluventic Endoaquepts

Typical Pedon

Newark silt loam, in a cultivated field on a flood plain at an elevation of about 380 feet above mean sea level; 3 miles northwest of Owensboro, Kentucky; 1/2 mile north of Ben Hawes Park, 1,000 feet south of the railroad, and 400 feet west of Willett Road; Daviess County, Kentucky; USGS Owensboro West, Kentucky, topographic quadrangle; lat. 37 degrees 48 minutes 18.6 seconds N. and long. 87 degrees 11 minutes 18.1 seconds W.; UTM Zone 16, Easting 483419, Northing 4184215; NAD 83:

Ap—0 to 9 inches; brown (10YR 4/3) silt loam; weak fine granular structure; very friable; many fine roots; slightly acid; abrupt smooth boundary.
Bw—9 to 15 inches; brown (10YR 5/3) silt loam; weak fine granular structure; very friable; few fine roots; many fine and medium faint light brownish gray (10YR 6/2) iron depletions; few small flakes of mica; slightly acid; gradual smooth boundary.
Bg—15 to 32 inches; light brownish gray (2.5Y 6/2) silt loam; weak medium subangular blocky structure; very friable; many medium distinct brown (10YR 4/3) masses of oxidized iron; few small flakes of mica; slightly acid; gradual smooth boundary.
Cg—32 to 52 inches; light brownish gray (2.5Y 6/2) silt loam; massive; very friable; few fine prominent irregular black (N 2.5/) and dark brown (7.5YR 3/3) weakly cemented iron-manganese nodules; common coarse distinct yellowish brown (10YR 5/4) and common medium faint brown (10YR 5/3) extremely weakly cemented iron-manganese accumulations and common medium faint light gray (10YR 7/2) clay depletions; few small flakes of mica; slightly acid; gradual smooth boundary.
C—52 to 60 inches; brown (10YR 4/3) silt loam with thin strata of loam and silty clay loam; massive; very friable; few fine prominent black (N 2.5/) and few fine faint dark brown (7.5YR 3/3) irregular weakly cemented iron-manganese nodules; many

medium and coarse distinct gray (10YR 6/1) iron depletions; few small flakes of mica; slightly acid.

Range in Characteristics

Miscellaneous characteristics: Some pedons have a transitional BA horizon, which has colors and textures similar to those of the Bw horizon. Also, some pedons have a BCg horizon, which has colors and textures similar to those of the Bg or Cg horizon.

Ap horizon:
Hue—7.5YR to 2.5Y
Value—4 or 5
Chroma—2 to 4
Texture—silt loam or silty clay loam
Reaction—moderately acid to slightly alkaline

Bw horizon:
Hue—7.5YR to 2.5Y
Value—4 or 5
Chroma—3 or 4
Texture—silt loam or silty clay loam
Reaction—moderately acid to slightly alkaline

Bg horizon:
Hue—7.5YR to 2.5Y
Value—4 to 7
Chroma—1 or 2
Texture—silt loam or silty clay loam
Reaction—moderately acid to slightly alkaline

Cg horizon:
Hue—7.5YR to 2.5Y
Value—4 to 7
Chroma—1 or 2
Texture—silt loam or silty clay loam
Reaction—moderately acid to slightly alkaline

C horizon:
Hue—7.5YR to 2.5Y
Value—4 to 7
Chroma—2 to 4
Texture—commonly silt loam or silty clay loam; thin strata of loam, fine sandy loam, clay loam, or silty clay in some pedons
Reaction—moderately acid to slightly alkaline

Newhaven Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Aquic Argiudolls

Typical Pedon

Newhaven loam, in a nearly level area in a cultivated field at an elevation of about 368 feet above mean sea level; 1,620 feet west and 1,680 feet south of the northeast corner of sec. 20, T. 6 S., R. 10 E.; White County, Illinois; USGS Emma, Illinois, topographic quadrangle; lat. 37 degrees 59 minutes 27 seconds N. and long. 88 degrees 07 minutes 26 seconds W.; UTM Zone 16, Easting 401320, Northing 4205403; NAD 83:

Ap—0 to 7 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; few fine roots; neutral; abrupt smooth boundary.
A—7 to 15 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; moderate fine subangular blocky structure; friable; few very fine roots; neutral; clear smooth boundary.
Bt1—15 to 22 inches; brown (10YR 4/3) loam; weak fine prismatic structure parting to moderate fine subangular blocky; friable; few very fine roots; many distinct very dark grayish brown (10YR 3/2) clay films on faces of peds; common fine faint dark grayish brown (10YR 4/2) clay depletions and few fine prominent yellowish brown (10YR 5/8) masses of oxidized iron; few fine and medium distinct spherical black (10YR 2/1) extremely weakly cemented iron-manganese accumulations; 2 percent gravel; neutral; clear smooth boundary.
Bt2—22 to 30 inches; brown (10YR 4/3) clay loam; moderate medium prismatic structure; firm; few very fine roots; many distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common medium prominent strong brown (7.5YR 5/8) masses of oxidized iron; few fine distinct spherical black (10YR 2/1) iron-manganese accumulations; 2 percent gravel; slightly acid; clear smooth boundary.
Bt3—30 to 40 inches; grayish brown (10YR 5/2) clay loam; moderate coarse prismatic structure; firm; few very fine roots; many distinct dark gray (10YR 4/1) clay films on faces of peds; many medium prominent strong brown (7.5YR 5/8) and common medium faint brown (10YR 5/3) masses of oxidized iron; 4 percent gravel; moderately acid; abrupt smooth boundary.
2Bt4—40 to 47 inches; brown (10YR 4/3) sandy loam; weak medium subangular blocky structure; friable; few distinct dark brown (10YR 3/3) clay films on faces of peds; few medium prominent strong brown (7.5YR 5/8) masses of oxidized iron; moderately acid; clear smooth boundary.
2E and Bt—47 to 80 inches; yellowish brown (10YR 5/6) loamy sand (E) and dark brown (7.5YR 3/4) sandy loam (Bt); weak medium subangular blocky structure; very friable (E); moderate medium subangular blocky structure; friable (Bt); few distinct dark brown (7.5YR 3/2) clay films on faces of peds and bridging sand grains (Bt); lamellae are $^{1}/_{2}$ inch to 2 inches thick; moderately acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches
Series control section: 60 to more than 80 inches in thickness; averages less than 15 percent gravel

Ap or A horizon:
Hue—10YR
Value—2 to 3
Chroma—1 or 2
Texture—silt loam or loam
Reaction—moderately acid to slightly alkaline

Bt or 2Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—2 to 4
Texture—clay loam, loam, sandy clay loam, fine sandy loam, or sandy loam
Reaction—very strongly acid to neutral

2E and Bt horizon:
Hue—7.5YR or 10YR
Value—3 to 6
Chroma—2 to 4

Texture—banded with lamellae of fine sandy loam to very fine sand
Reaction—moderately acid to neutral

Nolin Series

Taxonomic classification: Fine-silty, mixed, active, mesic Dystric Fluventic Eutrudepts

Typical Pedon

Nolin silty clay loam, in a cultivated field on a flood plain at an elevation of about 370 feet above sea level; 1,760 feet south and 400 feet west of the northeast corner of sec. 4, T. 5 S., R. 14 W.; White County, Illinois; USGS Solitude, Indiana-Illinois, topographic quadrangle; lat. 38 degrees 07 minutes 24 seconds N. and long. 87 degrees 58 minutes 39 seconds W.; UTM Zone 16, Easting 414316, Northing 4219934; NAD 83:

Ap—0 to 9 inches; brown (10YR 4/3) silty clay loam, brown (10YR 5/3) dry; moderate very fine subangular blocky structure; friable; few very fine roots; neutral; abrupt smooth boundary.

Bw1—9 to 27 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; friable; few very fine roots; common distinct brown (10YR 4/3) organic coatings on faces of peds; neutral; gradual smooth boundary.

Bw2—27 to 51 inches; dark yellowish brown (10YR 4/4) silty clay loam; weak coarse subangular blocky structure; friable; few very fine roots; common distinct brown (10YR 4/3) organic coatings on faces of peds; neutral; gradual smooth boundary.

C—51 to 60 inches; dark yellowish brown (10YR 4/4) silt loam; massive; friable; neutral.

Range in Characteristics

Ap horizon:
Hue—10YR or 2.5Y
Value—4 or 5
Chroma—2 or 3
Texture—silt loam or silty clay loam
Reaction—moderately acid to neutral

Bw horizon:
Hue—7.5YR to 2.5Y
Value—4 or 5
Chroma—3 to 6
Texture—silt loam or silty clay loam
Reaction—moderately acid to neutral

C horizon:
Hue—7.5YR to 2.5Y
Value—4 or 5
Chroma—2 to 6
Texture—silty clay loam, silt loam, loam, fine sandy loam, or sandy loam
Reaction—moderately acid to slightly alkaline

Parke Series

Taxonomic classification: Fine-silty, mixed, active, mesic Ultic Hapludalfs

Typical Pedon

Parke silt loam, on a north-facing, convex slope of 8 percent in a cultivated field at an elevation of about 710 feet above mean sea level; 900 feet west and 1,500 feet north of the southeast corner of sec. 34, T. 11 N., R. 3 W.; Owen County, Indiana; USGS Gosport, Indiana, topographic quadrangle; lat. 39 degrees 20 minutes 35.9 seconds N. and long. 86 degrees 43 minutes 49 seconds W.; UTM Zone 16, Easting 523242, Northing 4354910; NAD 83:

Ap—0 to 6 inches; dark yellowish brown (10YR 4/4) silt loam, light yellowish brown (10YR 6/4) dry; moderate medium granular structure; friable; many very fine and fine roots; common very fine and fine interstitial and tubular pores; strongly acid; abrupt smooth boundary.

Bt1—6 to 11 inches; brown (7.5YR 5/4) silt loam; weak fine subangular blocky structure; friable; common very fine and fine roots; common very fine and fine interstitial and tubular pores; common distinct brown (7.5YR 4/4) clay films on faces of peds and in pores; very strongly acid; clear wavy boundary.

Bt2—11 to 17 inches; brown (7.5YR 5/4) silty clay loam; fine and medium subangular blocky structure; firm; few very fine and fine roots; few very fine and fine vesicular and tubular pores; common distinct brown (7.5YR 4/4) clay films on faces of peds and in pores; few pale brown (10YR 6/3) silt coatings on faces of peds; very strongly acid; gradual wavy boundary.

Bt3—17 to 26 inches; brown (7.5YR 5/4) silt loam; moderate medium subangular blocky structure; firm; few very fine and fine roots; few very fine and fine vesicular and tubular pores; common distinct brown (7.5YR 4/4) clay films on faces of peds and in pores; few pale brown (10YR 6/3) silt coatings on faces of peds; very strongly acid; clear wavy boundary.

2Bt4—26 to 35 inches; brown (7.5YR 5/4) silt loam; moderate medium and coarse subangular blocky structure; friable; few very fine and fine roots; few very fine and fine vesicular and tubular pores; common distinct brown (7.5YR 4/4) clay films on faces of peds and in pores; few pale brown (10YR 6/3) silt coatings on faces of peds; 1 percent gravel; very strongly acid; clear wavy boundary.

3Btb1—35 to 41 inches; brown (7.5YR 5/4) fine sandy loam; weak coarse subangular blocky structure; friable; few very fine and fine vesicular and tubular pores; common distinct brown (7.5YR 4/4) clay films on faces of peds and in pores; 1 percent gravel; very strongly acid; gradual wavy boundary.

3Btb2—41 to 56 inches; brown (7.5YR 5/4) fine sandy loam; weak coarse subangular blocky structure; friable; few very fine and fine vesicular and tubular pores; few distinct brown (7.5YR 4/4) clay films on faces of peds and in pores; 1 percent gravel; very strongly acid; gradual wavy boundary.

3Btb3—56 to 65 inches; brown (7.5YR 5/4) fine sandy loam; weak very coarse subangular blocky structure; friable; common very fine and fine interstitial and tubular pores; common distinct brown (7.5YR 4/4) clay bridges between sand grains; 2 percent gravel; very strongly acid; gradual wavy boundary.

3Btb4—65 to 80 inches; yellowish red (5YR 4/6) sandy clay loam; weak very coarse subangular blocky structure; friable; common very fine and fine interstitial and tubular pores; common distinct reddish brown (5YR 4/4) clay bridges between sand grains; few light yellowish brown (10YR 6/4) silt coatings on vertical faces of peds; 1 percent gravel; very strongly acid.

Range in Characteristics

Thickness of the loess or silty material: 20 to 40 inches
Depth to the base of the argillic horizon: 80 to more than 100 inches

Ap or A horizon:
Hue—10YR

Value—4 or 5 (Ap); 2 to 4 (A)
Chroma—3 to 6 (Ap); 2 or 3 (A)
Texture—silt loam or silty clay loam
Reaction—strongly acid to slightly acid in areas that have not been limed; ranges to neutral in areas that have been limed

EB or E horizon (if it occurs):
Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—silt loam
Reaction—strongly acid to slightly acid in areas that have not been limed; ranges to neutral in areas that have been limed

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Texture—silty clay loam or silt loam
Reaction—very strongly acid to moderately acid

2Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Texture—silt loam
Reaction—very strongly acid to moderately acid

3Btb horizon:
Hue—2.5YR to 7.5YR; 5YR or redder in some part
Value—3 to 5
Chroma—3 to 6
Texture—sandy clay loam, loam, sandy loam, or fine sandy loam
Reaction—very strongly acid or strongly acid

Patton Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Endoaquolls

Typical Pedon

Patton silty clay loam, in a nearly level area in a cultivated field at an elevation of about 385 feet above mean sea level; 475 feet north and 50 feet east of the southwest corner of sec. 8, T. 3 S., R. 10 E.; Edwards County, Illinois; USGS Golden Gate, Illinois, topographic quadrangle; lat. 38 degrees 16 minutes 18 seconds N. and long. 88 degrees 07 minutes 52 seconds W.; UTM Zone 16, Easting 401066, Northing 4236357; NAD 83:

Ap—0 to 7 inches; very dark gray (10YR 3/1) silty clay loam, dark grayish brown (10YR 4/2) dry; weak medium granular structure; friable; neutral; abrupt smooth boundary.
A—7 to 15 inches; very dark gray (10YR 3/1) silty clay loam, dark grayish brown (10YR 4/2) dry; weak medium subangular blocky structure parting to moderate fine granular; friable; few fine prominent yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; neutral; gradual smooth boundary.
Bg1—15 to 20 inches; dark gray (10YR 4/1) silty clay loam; moderate fine and medium prismatic structure parting to moderate medium subangular blocky; firm; few very dark gray (10YR 3/1) organic stains on faces of peds; few fine faint grayish brown

(2.5Y 5/2) iron depletions and few fine prominent light olive brown (2.5Y 5/6) masses of oxidized iron in the matrix; neutral; gradual smooth boundary.

Bg2—20 to 28 inches; dark gray (10YR 4/1) silty clay loam; moderate fine and medium prismatic structure parting to moderate fine and medium subangular blocky; firm; few fine prominent yellowish brown (10YR 5/6) and common fine prominent olive yellow (2.5Y 6/6) masses of oxidized iron in the matrix; neutral; gradual smooth boundary.

Bg3—28 to 35 inches; dark grayish brown (2.5Y 4/2) silty clay loam; weak fine and medium subangular blocky structure; firm; few fine prominent yellowish brown (10YR 5/6) and common fine prominent olive yellow (2.5Y 6/6) masses of oxidized iron in the matrix; slightly alkaline; gradual smooth boundary.

Cg—35 to 60 inches; grayish brown (2.5Y 5/2), stratified silty clay loam and silt loam; massive; friable; common fine prominent strong brown (7.5YR 5/8) and yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; strongly effervescent in the lower part; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Depth to the base of the cambic horizon: 24 to 55 inches
Depth to carbonates: More than 30 inches

Ap or A horizon:
Hue—10YR
Value—2 to 3
Chroma—1 or 2
Texture—silty clay loam
Reaction—slightly acid or neutral

Bg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—3 to 5
Chroma—1 or 2
Texture—silty clay loam or silt loam
Reaction—slightly acid to slightly alkaline

Cg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 or 5
Chroma—1 or 2
Texture—stratified silty clay loam and silt loam
Reaction—neutral to moderately alkaline

Petrolia Series

Taxonomic classification: Fine-silty, mixed, superactive, nonacid, mesic Fluvaquentic Endoaquepts

Typical Pedon

Petrolia silty clay loam, in a nearly level area in a cultivated field at an elevation of about 412 feet above mean sea level; about 400 feet south and 800 feet west of the center of sec. 29, T. 1 N., R. 3 W.; Clinton County, Illinois; USGS Addieville, Illinois, topographic quadrangle; lat. 38 degrees 29 minutes 56 seconds N. and long. 89 degrees 27 minutes 28 seconds W.; UTM Zone 16, Easting 285659, Northing 4263792; NAD 83:

Ap—0 to 8 inches; dark grayish brown (2.5Y 4/2) silty clay loam, light brownish gray (2.5Y 6/2) dry; moderate fine granular structure; friable; common very fine roots; few fine prominent spherical black (N 2.5/) and strong brown (7.5YR 4/6) extremely weakly cemented iron-manganese accumulations throughout; about 34 percent clay; neutral; abrupt smooth boundary.

Bg—8 to 15 inches; dark gray (2.5Y 4/1) silty clay loam; weak medium subangular blocky structure; friable; few very fine roots; few faint dark gray (2.5Y 4/1) pressure faces on faces of peds; common fine prominent dark yellowish brown (10YR 4/4) and common fine faint dark grayish brown (2.5Y 4/2) masses of oxidized iron and manganese in the matrix; few fine prominent spherical black (N 2.5/) and strong brown (7.5YR 4/6) extremely weakly cemented iron-manganese accumulations throughout; about 32 percent clay; slightly acid; clear smooth boundary.

Btg1—15 to 26 inches; gray (2.5Y 5/1) silty clay loam; weak fine prismatic structure parting to moderate medium subangular blocky; firm; few very fine roots; common distinct dark gray (2.5Y 4/1) clay films on faces of peds; common fine and medium prominent dark yellowish brown (10YR 4/4) masses of oxidized iron and manganese in the matrix; few fine and medium prominent spherical black (N 2.5/) iron-manganese nodules with sharp strong brown (7.5YR 4/6) boundaries and few fine prominent irregular strong brown (7.5YR 5/6) extremely weakly cemented iron-manganese accumulations throughout; about 33 percent clay; slightly acid; clear smooth boundary.

Btg2—26 to 42 inches; gray (2.5Y 5/1) silty clay loam; weak medium prismatic structure parting to weak medium and coarse subangular blocky; firm; few very fine roots; few distinct dark gray (2.5Y 4/1) clay films on faces of peds; common fine and medium prominent yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; few fine and medium prominent spherical black (N 2.5/) iron-manganese nodules with sharp strong brown (7.5YR 4/6) boundaries and common fine prominent irregular strong brown (7.5YR 5/6) extremely weakly cemented iron-manganese accumulations throughout; about 34 percent clay; slightly acid; gradual smooth boundary.

Btg3—42 to 55 inches; gray (2.5Y 5/1) silty clay loam; weak medium prismatic structure; firm; few very fine roots; few distinct dark gray (2.5Y 4/1) clay films lining root channels and pores; common medium prominent yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; few medium prominent spherical black (7.5YR 2.5/1) iron-manganese nodules with clear strong brown (7.5YR 5/6) boundaries and common fine and medium prominent irregular strong brown (7.5YR 4/6) extremely weakly cemented iron-manganese accumulations throughout; about 35 percent clay; slightly acid; gradual smooth boundary.

Cg1—55 to 73 inches; gray (2.5Y 6/1) silty clay loam; massive; firm; few very fine roots in old channels; few distinct dark gray (2.5Y 4/1) clay films lining root channels and pores; many fine and medium prominent yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; few medium prominent spherical black (7.5YR 2.5/1) iron-manganese nodules with clear strong brown (7.5YR 5/6) boundaries and common fine and medium prominent irregular strong brown (7.5YR 4/6) extremely weakly cemented iron-manganese accumulations throughout; about 33 percent clay; neutral; diffuse smooth boundary.

Cg2—73 to 80 inches; gray (2.5Y 6/1) silty clay loam; massive; firm; common medium and coarse prominent yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; few fine prominent irregular black (7.5YR 2.5/1) iron-manganese nodules with clear strong brown (7.5YR 5/6) boundaries and few fine and medium prominent irregular strong brown (7.5YR 4/6) extremely weakly cemented iron-manganese accumulations throughout; dark gray (2.5Y 4/1) krotovinas; about 35 percent clay; neutral.

Range in Characteristics

Depth to the base of the cambic horizon: 30 to 80 inches
Particle-size control section: Averages 27 to 35 percent clay and less than 20 percent fine sand or coarser material

Ap or A horizon:
Hue—10YR or 2.5Y
Value—typically 4 to 6; 3 in some uncultivated areas
Chroma—1 or 2
Texture—silty clay loam
Reaction—moderately acid to slightly alkaline

Bg or Btg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 2
Texture—silty clay loam
Reaction—moderately acid to neutral

Cg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 2
Texture—dominantly silty clay loam; silt loam below a depth of 40 inches in some pedons; strata of silty clay, silt loam, loam, or fine sandy loam below a depth of 40 inches in other pedons
Reaction—strongly acid to slightly alkaline

Piopolis Series

Taxonomic classification: Fine-silty, mixed, active, acid, mesic Fluvaquentic Endoaquepts

Typical Pedon

Piopolis silty clay loam, in a nearly level area in a cultivated field at an elevation of about 384 feet above mean sea level; about 1,340 feet south and 1,300 feet west of the center of sec. 26, T. 3 S., R. 6 E.; Hamilton County, Illinois; USGS Belle Prairie City, Illinois, topographic quadrangle; lat. 38 degrees 13 minutes 47 seconds N. and long. 88 degrees 30 minutes 55 seconds W.; UTM Zone 16, Easting 367380, Northing 4232385; NAD 83:

Ap—0 to 7 inches; grayish brown (10YR 5/2) silty clay loam, light grayish brown (10YR 6/2) dry; weak medium granular structure; friable; slightly acid; abrupt smooth boundary.
Bg1—7 to 14 inches; light brownish gray (10YR 6/2) silty clay loam; weak coarse subangular blocky structure; firm; common medium prominent strong brown (7.5YR 5/6) masses of oxidized iron in the matrix; common medium faint gray (10YR 6/1) iron depletions in the matrix; strongly acid; gradual smooth boundary.
Bg2—14 to 23 inches; gray (10YR 6/1) silty clay loam; weak coarse subangular blocky structure; firm; many medium prominent strong brown (7.5YR 5/6) masses of oxidized iron in the matrix; few medium prominent black (10YR 2/1) iron-manganese concretions; strongly acid; gradual smooth boundary.
Bg3—23 to 37 inches; gray (10YR 6/1) silty clay loam; weak coarse subangular blocky structure; firm; many medium prominent strong brown (7.5YR 5/6) and common medium distinct yellowish brown (10YR 5/4) masses of oxidized iron accumulation

in the matrix; common medium prominent black (10YR 2/1) iron-manganese concretions; strongly acid; gradual smooth boundary.

Cg—37 to 80 inches; gray (10YR 6/1) silty clay loam; massive; firm; few coarse prominent strong brown (7.5YR 5/6) masses of oxidized iron in the matrix; strongly acid.

Range in Characteristics

Depth to the base of the cambic horizon: 20 to 60 inches

Particle-size control section: Averages 27 to 35 percent clay and less than 15 percent fine sand or coarser material

Other characteristics: An irregular decrease in organic carbon content with increasing depth

Ap or A horizon:

Hue—10YR, 2.5Y, or 5Y

Value—typically 4 to 6; 3 in some pedons in uncultivated areas

Chroma—1 to 3

Texture—commonly silty clay loam; less commonly silt loam

Reaction—strongly acid to neutral

Bg horizon:

Hue—10YR, 2.5Y, 5Y, or N

Value—4 to 6

Chroma—0 to 2

Texture—silty clay loam

Reaction—very strongly acid or strongly acid

Cg horizon:

Hue—10YR, 2.5Y, 5Y, or N

Value—4 to 6

Chroma—0 to 2

Texture—dominantly silty clay loam or silt loam; thin strata of fine sandy loam, loam, or silty clay in some pedons

Reaction—very strongly acid or strongly acid above a depth of 40 inches; ranges to neutral below a depth of 40 inches

Racoon Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Endoaqualfs

Typical Pedon

Racoon silt loam, in a nearly level area in a cultivated field at an elevation of about 425 feet above mean sea level; approximately 135 feet north and 2,095 feet east of the center of sec. 30, T. 7 S., R. 5 E.; Saline County, Illinois; USGS Akin, Illinois, topographic quadrangle; lat. 37 degrees 53 minutes 08 seconds N. and long. 88 degrees 41 minutes 23 seconds W.; UTM Zone 16, Easting 351411, Northing 4194463; NAD 83:

Ap—0 to 6 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; moderate fine granular structure; friable; common fine faint very dark grayish brown (10YR 3/2) extremely weakly cemented iron-manganese accumulations throughout; neutral; abrupt smooth boundary.

Eg1—6 to 10 inches; dark grayish brown (10YR 4/2) silt loam; weak thin platy structure; firm, dense as if compacted like a plowsole; common fine faint very dark grayish brown (10YR 3/2) extremely weakly cemented iron-manganese accumulations throughout; neutral; abrupt smooth boundary.

Eg2—10 to 14 inches; dark grayish brown (10YR 4/2) silt loam; weak medium platy structure parting to weak fine granular; friable; common fine faint grayish brown (10YR 5/2) and few fine distinct light gray (10YR 7/1) iron depletions in the matrix; common fine faint very dark grayish brown (10YR 3/2) extremely weakly cemented iron-manganese accumulations throughout; strongly acid; clear smooth boundary.

Eg3—14 to 30 inches; gray (10YR 6/1) silt loam; weak medium platy structure parting to weak fine granular; friable; common very fine constricted tubular pores; common medium prominent yellowish brown (10YR 5/6) and brownish yellow (10YR 6/6) masses of oxidized iron in the matrix; many fine prominent black (10YR 2/1) manganese masses throughout; few grayish brown (10YR 5/2) krotovinas; very strongly acid; clear smooth boundary.

Btg1—30 to 37 inches; gray (10YR 6/1) silty clay loam; weak medium prismatic structure parting to weak fine subangular blocky; firm; few very fine tubular pores; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common fine prominent yellowish brown (10YR 5/6) and brownish yellow (10YR 6/6) masses of oxidized iron in the matrix; common fine prominent black (10YR 2/1) iron-manganese concretions; very strongly acid; clear smooth boundary.

Btg2—37 to 47 inches; gray (10YR 6/1) silty clay loam; moderate medium prismatic structure parting to weak medium subangular blocky; firm; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; few fine faint light gray (10YR 7/1) iron depletions and many fine prominent yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; common fine prominent black (10YR 2/1) iron-manganese concretions; very strongly acid; clear smooth boundary.

Btg3—47 to 59 inches; gray (10YR 6/1) silty clay loam; weak medium prismatic structure parting to weak medium subangular blocky; firm; few faint gray (10YR 5/1) clay films and common prominent dark olive gray (5Y 3/2) organoargillans on faces of peds; common medium prominent strong brown (7.5YR 5/6) and brown (7.5YR 4/4) masses of oxidized iron and manganese in the matrix; few fine prominent black (10YR 2/1) iron-manganese concretions; strongly acid; clear smooth boundary.

Cg—59 to 80 inches; gray (5Y 6/1 and 10YR 6/1) silt loam; massive; friable; many coarse distinct grayish brown (10YR 5/2) and prominent brown (7.5YR 4/4) masses of oxidized iron and manganese in the matrix; slightly acid (increasing to neutral in the lower part).

Range in Characteristics

Depth to the top of the argillic horizon: 24 to 36 inches
Depth to the base of the argillic horizon: 40 to 75 inches
Particle-size control section: Averages 27 to 35 percent clay, less than 10 percent sand, and less than 2 percent gravel

Ap or A horizon:
Hue—10YR
Value—3 to 6 (5 to 7 dry)
Chroma—2 or 3
Texture—silt loam
Reaction—very strongly acid to neutral

Eg horizon:
Hue—10YR or 2.5Y
Value—4 to 7 (6 to 8 dry)
Chroma—1 or 2
Texture—silt loam
Reaction—very strongly acid to neutral

Btg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 7
Chroma—0 to 2
Texture—dominantly silty clay loam; silt loam in the upper or lower subhorizons in some pedons
Reaction—very strongly acid or strongly acid

Cg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 7
Chroma—1 or 2
Texture—dominantly silt loam or loam; stratified loamy fine sand to silty clay in some pedons
Reaction—very strongly acid to neutral

Ridgway Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Ridgway silt loam, on a nearly level, rarely flooded outwash terrace in a cultivated field at an elevation of about 361 feet above mean sea level; 900 feet west and 354 feet south of the northeast corner of sec. 1, T. 7 S., R. 10 E.; White County, Illinois; USGS Emma, Illinois, topographic quadrangle; lat. 37 degrees 57 minutes 00 seconds N. and long. 88 degrees 02 minutes 48.5 seconds W.; UTM Zone 16, Easting 408027, Northing 4200771; NAD 83:

Ap—0 to 10 inches; dark grayish brown (10YR 4/2) silt loam, pale brown (10YR 6/3) dry; weak fine granular structure; friable; common very fine roots; neutral; abrupt smooth boundary.

BE—10 to 14 inches; brown (10YR 4/3) silty clay loam; moderate fine subangular blocky structure; friable; few very fine roots; common distinct dark grayish brown (10YR 4/2) silt coatings on faces of peds; neutral; clear smooth boundary.

Bt1—14 to 22 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; firm; few very fine roots; many distinct brown (10YR 4/3) clay films on faces of peds; neutral; gradual smooth boundary.

Bt2—22 to 30 inches; yellowish brown (10YR 5/6) silty clay loam; moderate medium and coarse subangular blocky structure; firm; few very fine roots; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; slightly acid; clear smooth boundary.

2Bt3—30 to 39 inches; yellowish brown (10YR 5/6) clay loam; weak coarse subangular blocky structure; friable; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.

2Bt4—39 to 49 inches; strong brown (7.5YR 4/6) sandy loam; weak coarse subangular blocky structure; very friable; few distinct brown (7.5YR 4/4) clay films on faces of peds; moderately acid; gradual smooth boundary.

2E and Bt—49 to 80 inches; yellowish brown (10YR 5/6) loamy sand (E); brown (7.5YR 4/4) lamellae of sandy loam (Bt); single grain and loose (E); massive and very friable (Bt); few distinct brown (7.5YR 4/4) clay bridges between sand grains (Bt); moderately acid.

Range in Characteristics

Thickness of the loess: 24 to 40 inches
Depth to the base of soil development: 50 to 100 inches

Content of rock fragments: 0 in the A horizon and in the upper part of the Bt horizon; less than 10 percent by volume in the 2Bt and 2E and Bt horizons
Reaction: More acid than slightly acid in at least one subhorizon in the subsoil; neutral to very strongly acid in individual subhorizons

Ap or A horizon:
Hue—10YR
Value—4 or 5 (6 or 7 dry); 3 (5 dry) in A horizons that are less than 6 inches thick
Chroma—2 or 3
Texture—silt loam

Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—silty clay loam or silt loam

2Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—clay loam, loam, or sandy loam; stratified in some pedons; coarser or finer textures in some strata

2E and Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—loamy sand, sand, fine sand, loamy fine sand, very fine sand, or loamy very fine sand (E); loamy sand, sandy loam, loamy fine sand, loamy very fine sand, fine sandy loam, or very fine sandy loam (Bt)

Roby Series

Taxonomic classification: Coarse-loamy, mixed, superactive, mesic Aquic Hapludalfs

Typical Pedon

Roby fine sandy loam, in a gently sloping area in a cultivated field at an elevation of about 405 feet above mean sea level; State Plane Coordinates 498,000 feet north and 562,750 feet east (Illinois West Zone); T. 6 S., R. 8 W.; Randolph County, Illinois; USGS Evansville, Illinois, topographic quadrangle; lat. 38 degrees 02 minutes 03 seconds N. and long. 89 degrees 56 minutes 55 seconds W.; UTM Zone 16, Easting 241212, Northing 4213711; NAD 83:

Ap—0 to 9 inches; dark grayish brown (10YR 4/2) fine sandy loam, light brownish gray (10YR 6/2) dry; moderate medium granular structure parting to weak medium platy; very friable; neutral; abrupt smooth boundary.
E—9 to 13 inches; brown (10YR 4/3) fine sandy loam; weak medium platy structure parting to moderate medium granular; very friable; neutral; clear smooth boundary.
BE—13 to 16 inches; brown (10YR 4/3) fine sandy loam; weak and moderate fine and medium subangular blocky structure; very friable; few distinct pale brown (10YR 6/3) coatings of very fine sand on faces of peds; few fine distinct black (2.5Y 2.5/1) manganese masses; slightly acid; clear smooth boundary.
Bt1—16 to 21 inches; brown (10YR 5/3) fine sandy loam; moderate medium subangular blocky structure; very friable; common distinct brown (10YR 4/3) clay films on faces of peds; common medium faint grayish brown (10YR 5/2)

iron depletions in the matrix; common fine distinct black (2.5Y 2.5/1) manganese masses; moderately acid; clear smooth boundary.

Bt2—21 to 27 inches; brown (10YR 5/3) loam; strong medium subangular blocky structure; friable; common distinct grayish brown (10YR 5/2) and brown (10YR 4/3) clay films on faces of peds; many coarse faint light brownish gray (10YR 6/2) iron depletions and common coarse prominent strong brown (7.5YR 5/6) masses of oxidized iron in the matrix; moderately acid; abrupt smooth boundary.

Bt3—27 to 31 inches; brown (10YR 5/3) clay loam; moderate medium subangular blocky structure parting to weak fine prismatic; firm; many distinct brown (10YR 4/3) clay films and many distinct light brownish gray (10YR 6/2) coatings of very fine sand on faces of peds; common fine faint grayish brown (10YR 5/2) iron depletions and many medium faint brown (7.5YR 5/4) masses of oxidized iron in the matrix; common fine distinct black (2.5Y 2.5/1) manganese masses; slightly acid; abrupt smooth boundary.

Bt4—31 to 41 inches; brown (10YR 5/3) loam; strong medium subangular blocky structure parting to weak fine prismatic; friable; many distinct brown (10YR 4/3) clay films and many distinct light brownish gray (10YR 6/2) coatings of very fine sand on faces of peds; common fine faint grayish brown (10YR 5/2) iron depletions in the matrix; common fine distinct black (2.5Y 2.5/1) manganese masses and concretions; neutral; clear smooth boundary.

BCtg—41 to 49 inches; grayish brown (10YR 5/2) fine sandy loam; weak medium prismatic structure parting to weak medium subangular blocky; friable; common distinct brown (10YR 4/3) clay films and common distinct light brownish gray (10YR 6/2) coatings of very fine sand on faces of peds; many medium and coarse distinct yellowish brown (10YR 5/4) masses of oxidized iron in the matrix; many fine distinct black (2.5Y 2.5/1) manganese masses and concretions; neutral; gradual smooth boundary.

Cg—49 to 80 inches; stratified grayish brown (10YR 5/2) fine sandy loam and brown (10YR 4/3) loamy fine sand; massive; friable; common medium faint grayish brown (10YR 5/2) iron depletions and many medium distinct dark yellowish brown (10YR 4/4) masses of oxidized iron in the matrix; many fine distinct black (2.5Y 2.5/1) manganese masses and concretions; neutral.

Range in Characteristics

Depth to the base of soil development: 30 to 60 inches
Particle-size control section: Averages 12 to 18 percent clay and 45 to 80 percent sand

Ap horizon:
Hue—10YR
Value—4 or 5; 3 in some pedons in uncultivated areas
Chroma—2 or 3; 1 in some pedons in uncultivated areas
Texture—fine sandy loam or loam; loamy fine sand or sandy loam in some pedons
Reaction—very strongly acid to neutral

E or BE horizon:
Hue—10YR
Value—4 to 6
Chroma—3 or 4
Texture—loamy fine sand or fine sandy loam
Reaction—very strongly acid to moderately acid; ranges to neutral in areas that have been limed

Bt horizon:
Hue—10YR
Value—4 to 6
Chroma—2 to 6

Texture—fine sandy loam, sandy loam, or loam; thin layers of clay loam or sandy clay loam in some pedons
Reaction—very strongly acid to moderately acid in the upper part; ranges to neutral in the lower part

BCt, BCtg, BC, or BCg horizon (if it occurs):
Hue—10YR
Value—4 to 6
Chroma—2 to 8
Texture—fine sandy loam, sandy loam, or loam
Reaction—moderately acid to slightly alkaline

C horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—2 to 8
Texture—stratified sand to loam
Content of rock fragments—0 to 10 percent
Reaction—moderately acid to slightly alkaline

Ruark Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Typic Endoaqualfs

Typical Pedon

Ruark fine sandy loam, on a nearly level terrace in a cultivated field at an elevation of about 334 feet above mean sea level; approximately 1,195 feet north and 840 feet west of the southeast corner of sec. 24, T. 15 S., R. 2 W.; Alexander County, Illinois; USGS Tamms, Illinois, topographic quadrangle; lat. 37 degrees 11 minutes 36 seconds N. and long. 89 degrees 16 minutes 26 seconds W.; UTM Zone 16, Easting 298178, Northing 4118726; NAD 83:

Ap—0 to 7 inches; grayish brown (10YR 5/2) fine sandy loam, light gray (10YR 7/2) dry; weak medium granular structure; friable; common fine distinct yellowish brown (10YR 5/4) masses of oxidized iron in the matrix; strongly acid; abrupt smooth boundary.
Eg—7 to 18 inches; grayish brown (10YR 5/2) fine sandy loam; weak thick platy structure; friable; common medium prominent brownish yellow (10YR 6/6) masses of oxidized iron in the matrix; very strongly acid; clear smooth boundary.
BEg—18 to 20 inches; gray (10YR 5/1) loam; weak coarse subangular blocky structure; friable; few fine prominent yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; very strongly acid; clear smooth boundary.
Btg1—20 to 33 inches; gray (10YR 5/1) clay loam; weak medium prismatic structure parting to moderate coarse subangular blocky; friable; common faint dark grayish brown (10YR 4/2) clay films on faces of peds; common medium faint light gray (10YR 7/2) iron depletions and common fine and medium prominent brownish yellow (10YR 6/6) and yellowish brown (10YR 5/8) masses of oxidized iron in the matrix; very strongly acid; gradual smooth boundary.
Btg2—33 to 37 inches; gray (10YR 6/1) sandy clay loam; weak coarse subangular blocky structure; friable; few faint grayish brown (10YR 5/2) clay films on faces of peds; common medium prominent yellowish brown (10YR 5/6 and 5/8) masses of oxidized iron in the matrix; strongly acid; clear smooth boundary.
Cg1—37 to 44 inches; gray (10YR 6/1) loam; massive; friable; common fine prominent yellowish brown (10YR 5/6 and 5/8) masses of oxidized iron in the matrix; common fine and medium prominent black (2.5Y 2.5/1) iron-manganese concretions and manganese masses; slightly acid; clear smooth boundary.

Cg2—44 to 80 inches; light brownish gray (10YR 6/2) fine sandy loam; massive; friable; common fine prominent yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; neutral.

Range in Characteristics

Depth to the base of the argillic horizon: Commonly 35 to 40 inches; ranges from 30 to 50 inches
Reaction: Moderately acid to very strongly acid in the solum, except in the surface layer in areas that have been limed
Particle-size control section: Averages 20 to 35 percent clay and more than 30 percent fine sand or coarser material

A or Ap horizon:
Hue—10YR
Value—3 to 5 (6 or 7 dry)
Chroma—1 or 2
Texture—fine sandy loam, loam, or very fine sandy loam

Eg horizon:
Hue—10YR or 2.5Y
Value—5 to 7
Chroma—1 or 2
Texture—loam, sandy loam, or fine sandy loam

BEg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 or 2
Texture—loam, sandy loam, or fine sandy loam

Btg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 or 2
Texture—sandy clay loam, clay loam, loam, or sandy loam

Cg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 or 2
Texture—sandy loam, fine sandy loam, loam, or sandy clay loam; thin strata of loamy sand, sand, fine gravel, silt loam, or silty clay loam in some pedons

Sarpy Series

Taxonomic classification: Mixed, mesic Typic Udipsamments

Typical Pedon

Sarpy fine sand, on a nearly level and gently sloping natural levee in a cultivated field at an elevation of about 393 feet above mean sea level; on Meissner Island, approximately 2 miles northwest of Valmeyer, about 2,060 feet west and 2,280 feet south of the northeast corner of sec. 6, T. 3 S., R. 11 W.; Monroe County, Illinois; USGS Valmeyer, Illinois-Missouri, topographic quadrangle; lat. 38 degrees 18 minutes 23 seconds N. and long. 90 degrees 21 minutes 50 seconds W.; UTM Zone 15, Easting 730496, Northing 4242892; NAD 83:

Ap—0 to 9 inches; dark grayish brown (10YR 4/2) fine sand, light brownish gray (10YR 6/2) dry; weak fine granular structure; very friable; common very fine roots; slightly effervescent; slightly alkaline; abrupt smooth boundary.
C1—9 to 19 inches; dark grayish brown (10YR 4/2) fine sand; single grain; loose; few very fine roots; strongly effervescent; slightly alkaline; gradual smooth boundary.
C2—19 to 29 inches; dark grayish brown (10YR 4/2) fine sand; single grain; loose; few very fine roots; few coarse faint brown (10YR 4/3) masses of oxidized iron and manganese in the matrix; few fine faint dark brown (10YR 3/3) extremely weakly cemented iron-manganese accumulations; strongly effervescent; slightly alkaline; gradual smooth boundary.
C3—29 to 56 inches; dark grayish brown (10YR 4/2) fine sand; single grain; loose; few very fine roots; common medium faint brown (10YR 4/3) masses of oxidized iron and manganese in the matrix; common fine faint dark brown (10YR 3/3) extremely weakly cemented iron-manganese accumulations; strongly effervescent; slightly alkaline; gradual smooth boundary.
C4—56 to 80 inches; dark grayish brown (10YR 4/2) fine sand; single grain; loose; common medium faint brown (10YR 4/3) masses of oxidized iron and manganese in the matrix; strongly effervescent; slightly alkaline.

Range in Characteristics

Depth to carbonates: 0 to 60 inches
Particle-size control section: Less than 10 percent silt plus clay and less than 40 percent silt plus clay plus very fine sand
Reaction: Neutral or slightly alkaline throughout

Ap or A horizon:
Hue—10YR or 2.5Y
Value—3 to 5 (4 to 6 dry)
Chroma—1 to 3
Texture—sand, loamy sand, loamy fine sand, sandy loam, or fine sand

C horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 4
Texture—stratified loamy fine sand, loamy sand, fine sand, or sand

Sciotoville Series

Taxonomic classification: Fine-silty, mixed, active, mesic Aquic Fragiudalfs
Taxadjunct features: The Sciotoville soils in this survey area do not have the coarseness of structure and degree of brittleness in the fragic layer that are defined as the range for the series. Also, they have a slightly higher sand content in the particle-size control section. These differences, however, do not significantly affect the use and management of the soils. These soils are classified as fine-loamy, mixed, active, mesic Fragiaquic Hapludalfs.

Typical Pedon

Sciotoville silt loam, in a nearly level area in a cultivated field at an elevation of about 342 feet above mean sea level; approximately 180 feet south of the railroad tracks and 120 feet east of an old lane in the SE¼ NW¼ NE¼ NW¼ of sec. 8, T. 16 S., R. 5 E.; Massac County, Illinois; USGS Metropolis, Illinois, topographic quadrangle; lat. 37 degrees 08 minutes 38 seconds N. and long. 88 degrees 41 minutes 16 seconds W.; UTM Zone 16, Easting 354620, Northing 4132245; NAD 83:

Ap—0 to 8 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; moderate fine granular structure; friable; many fine faint very dark grayish brown (10YR 3/2) iron-manganese concretions; strongly acid; abrupt smooth boundary.

BE—8 to 14 inches; yellowish brown (10YR 5/6) silt loam; weak fine subangular blocky structure; friable; common fine prominent black (N 2.5/) and very dark grayish brown (10YR 3/2) iron-manganese concretions; very dark grayish brown (10YR 3/2) organic stains in root channels; very strongly acid; clear smooth boundary.

Bt—14 to 24 inches; dark yellowish brown (10YR 4/4) silt loam; weak medium subangular blocky structure; friable; few faint yellowish brown (10YR 5/4) clay films on faces of peds; few fine faint pale brown (10YR 6/3) masses of oxidized iron; common fine prominent black (N 2.5/) and distinct very dark grayish brown (10YR 3/2) iron-manganese concretions; very strongly acid; clear smooth boundary.

Btx1—24 to 32 inches; brown (7.5YR 4/4) silt loam; moderate coarse prismatic structure; very firm; few prominent light brownish gray (10YR 6/2) silt coatings and few distinct yellowish brown (10YR 5/4) clay films on faces of peds; few fine prominent gray (10YR 6/1) iron depletions; few fine distinct yellowish brown (10YR 5/6) masses of oxidized iron; few fine distinct very dark grayish brown (10YR 3/2) iron-manganese concretions; brittle; very strongly acid; gradual smooth boundary.

Btx2—32 to 42 inches; brown (7.5YR 4/4) silt loam; moderate coarse prismatic structure; very firm; common prominent light gray (10YR 7/2) silt coatings and few prominent light brownish gray (10YR 6/2) clay films on faces of peds; common fine distinct light gray (10YR 7/2) iron depletions; common fine prominent black (N 2.5/) and distinct very dark grayish brown (10YR 3/2) iron-manganese concretions; brittle; very strongly acid; gradual smooth boundary.

BCt—42 to 52 inches; brown (7.5YR 4/4) clay loam; weak medium prismatic structure; firm; few prominent grayish brown (10YR 5/2) clay films on faces of peds; common medium distinct light brownish gray (10YR 6/2) iron depletions; common fine prominent black (N 2.5/) and distinct very dark grayish brown (10YR 3/2) iron-manganese concretions; very strongly acid; gradual smooth boundary.

C—52 to 80 inches; dark yellowish brown (10YR 4/4) silty clay loam; massive; firm; common fine distinct light brownish gray (10YR 6/2) iron depletions; common fine prominent black (N 2.5/) and distinct very dark grayish brown (10YR 3/2) iron-manganese concretions; strongly acid.

Range in Characteristics

Depth to fragic soil properties: 18 to 38 inches
Depth of soil development: 45 to 80 inches
Content of rock fragments: 0 to 2 percent, by volume, in the Ap, A, or E horizon; 0 to 5 percent in the Bt and Btx horizons; and 0 to 15 percent in the C horizon; fragments are mainly water-worn fine sandstone or quartzite
Other characteristics: Some pedons have an E horizon.

Ap or A horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—2 or 3
Texture—silt loam
Reaction—slightly acid to strongly acid

BE horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam or loam
Reaction—strongly acid or very strongly acid

Bt horizon:
Hue—5YR, 7.5YR, or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam, silty clay loam, or loam with a high percentage of very fine sand
Reaction—strongly acid or very strongly acid

Btx horizon:
Hue—5YR, 7.5YR, or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—silt loam, silty clay loam, or loam
Reaction—strongly acid or very strongly acid in the upper part; moderately acid to very strongly acid in the lower part

BCt horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam, silty clay loam, clay loam, or loam
Reaction—moderately acid to very strongly acid

C horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—stratified or dominantly loam, silt loam, silty clay loam, or sandy loam; thin lenses of loamy sand in some pedons
Reaction—slightly acid to strongly acid

Sexton Series

Taxonomic classification: Fine, smectitic, mesic Typic Endoaqualfs

Typical Pedon

Sexton silt loam, in a cultivated field at an elevation of about 675 feet above mean sea level; 150 feet north and 200 feet west of the southeast corner of sec. 18, T. 12 N., R. 13 W.; Edgar County, Illinois; USGS Westfield East, Illinois, topographic quadrangle; lat. 39 degrees 28 minutes 58.3 seconds N. and long. 87 degrees 53 minutes 13.4 seconds W.; UTM Zone 16, Easting 0423712, Northing 4370737; NAD 83:

Ap—0 to 8 inches; grayish brown (10YR 5/2) silt loam, light gray (10YR 7/2) dry; moderate very fine granular structure; friable; few very fine roots; few fine distinct spherical black (10YR 2/1) extremely weakly cemented iron-manganese accumulations throughout; neutral; clear smooth boundary.

Eg—8 to 12 inches; gray (10YR 6/1) silt loam; moderate thin platy structure; friable; few very fine roots; few fine distinct brown (10YR 5/3) and common fine prominent yellowish brown (10YR 5/6) masses of oxidized iron and common fine faint dark grayish brown (10YR 4/2) iron depletions in the matrix; few fine prominent spherical black (10YR 2/1) extremely weakly cemented iron-manganese accumulations throughout; neutral; abrupt smooth boundary.

Btg/Eg—12 to 16 inches; grayish brown (10YR 5/2) silty clay loam (Btg); light gray (10YR 7/1) silt loam (Eg); moderate medium subangular blocky structure; firm; few very fine roots; common distinct dark grayish brown (10YR 4/2) and common faint grayish brown (10YR 5/2) clay films on faces of peds; common fine faint brown (10YR 4/3) and common fine distinct yellowish brown (10YR 5/4 and 5/6) masses

of oxidized iron in the matrix; common medium distinct spherical black (10YR 2/1) extremely weakly cemented iron-manganese accumulations throughout; neutral; clear smooth boundary.

Btg1—16 to 29 inches; gray (10YR 5/1) silty clay; moderate fine and medium prismatic structure; firm; few very fine roots; common distinct dark grayish brown (10YR 4/2) and common faint grayish brown (10YR 5/2) clay films and common distinct light gray (10YR 7/1) (dry) silt coatings on faces of peds; common fine and medium distinct and prominent yellowish brown (10YR 5/4 and 5/6) masses of oxidized iron and common fine faint light brownish gray (10YR 6/2) iron depletions in the matrix; common fine and medium distinct irregular black (10YR 2/1) extremely weakly cemented iron-manganese accumulations throughout; strongly acid; gradual smooth boundary.

Btg2—29 to 36 inches; gray (10YR 5/1) silty clay loam; moderate medium prismatic structure; firm; few very fine roots; common faint grayish brown (2.5Y 5/2) clay films and common distinct light gray (10YR 7/1) (dry) silt coatings on faces of peds; common fine and medium distinct and prominent yellowish brown (10YR 5/4 and 5/6) masses of oxidized iron and common fine faint light brownish gray (10YR 6/2) iron depletions in the matrix; common fine and medium distinct irregular black (10YR 2/1) extremely weakly cemented iron-manganese accumulations throughout; strongly acid; clear smooth boundary.

2BCtg—36 to 45 inches; light brownish gray (10YR 6/2) clay loam; weak coarse prismatic structure; firm; common faint grayish brown (2.5Y 5/2) clay films in root channels and pores; many prominent light gray (10YR 7/1) (dry) silt coatings on faces of peds; common fine and medium prominent yellowish brown (10YR 5/8) masses of oxidized iron and common fine faint gray (10YR 6/1) iron depletions in the matrix; common fine and medium prominent irregular black (10YR 2/1) extremely weakly cemented iron-manganese throughout; moderately acid; gradual smooth boundary.

2BCt1—45 to 60 inches; yellowish brown (10YR 5/4) sandy loam; weak coarse prismatic structure; friable; few faint grayish brown (2.5Y 5/2) clay films in root channels and pores; many prominent light gray (10YR 7/2) (dry) silt coatings on faces of peds; common fine and medium faint and distinct yellowish brown (10YR 5/4 and 5/6) extremely weakly cemented iron-manganese accumulations and common fine distinct gray (10YR 6/1) iron depletions in the matrix; common fine and medium distinct irregular black (10YR 2/1) manganese masses throughout; moderately acid; clear smooth boundary.

2BCt2—60 to 78 inches; stratified dark yellowish brown (10YR 4/6) loamy sand and gray (10YR 6/1) sandy loam; weak coarse prismatic structure; very friable; few grayish brown (10YR 5/2) clay bridges between sand grains; few fine distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; common fine prominent black (10YR 2/1) manganese masses throughout; strongly acid; abrupt smooth boundary.

3Cg—78 to 80 inches; 75 percent gray (10YR 6/1) and 25 percent yellowish brown (10YR 5/6) silt loam; firm; massive; friable; few root channels; slightly acid.

Range in Characteristics

Depth to horizons that have more than 15 percent fine sand or coarser material: 30 to 55 inches

Depth to the base of the argillic horizon: Typically more than 40 inches

Depth to carbonates: More than 60 inches

Particle-size control section: Averages 35 to 42 percent clay

Other characteristics: The Btg/Eg horizon, if it occurs, has properties similar to those of the Eg and Btg horizons. The texture of a crushed sample would be silty clay loam.

Ap horizon:
- Hue—10YR
- Value—4 to 6
- Chroma—1 or 2
- Texture—silt loam
- Content of rock fragments—none
- Reaction—moderately acid to neutral; ranges to slightly alkaline in areas that have recently been limed

Eg horizon:
- Hue—10YR
- Value—5 to 7
- Chroma—1 or 2
- Texture—silt loam
- Content of rock fragments—none
- Reaction—very strongly acid to neutral

Btg horizon:
- Hue—10YR or 2.5Y
- Value—4 to 6
- Chroma—1 or 2
- Texture—silty clay loam or silty clay
- Content of rock fragments—none
- Reaction—very strongly acid to moderately acid

2BCtg or 2BCt horizon:
- Hue—10YR or 2.5Y
- Value—4 to 6
- Chroma—1 to 8
- Texture—silty clay loam, clay loam, or sandy loam (more than 15 percent fine sand or coarser material); thin strata of sandy textures in some pedons
- Content of rock fragments—0 to 7 percent
- Reaction—strongly acid to neutral

2C, 2Cg, and 3Cg horizons:
- Hue—10YR or 2.5Y
- Value—4 to 6
- Chroma—1 to 8
- Texture—sandy loam, silt loam, loam, or clay loam, commonly stratified; thin strata of sandy textures in some pedons
- Content of rock fragments—0 to 15 percent
- Reaction—strongly acid to slightly alkaline

Sharon Series

Taxonomic classification: Coarse-silty, mixed, active, mesic Oxyaquic Dystrudepts

Typical Pedon

Sharon silt loam, on a frequently flooded flood plain in a cultivated field at an elevation of about 424 feet above mean sea level; approximately 1,800 feet west and 140 feet south of the northeast corner of sec. 25, T. 7 S., R. 4 E.; Franklin County, Illinois; USGS Akin, Illinois, topographic quadrangle; lat. 37 degrees 53 minutes 32 seconds N. and long. 88 degrees 42 minutes 45 seconds W.; UTM Zone 16, Easting 349425, Northing 4195221; NAD 83:

Ap1—0 to 3 inches; 60 percent brown (10YR 4/3) and 40 percent dark brown (10YR 3/3) silt loam, light brownish gray (10YR 6/2) dry; strong fine and medium granular

structure; friable; common fine and medium roots throughout; slightly acid; abrupt smooth boundary.

Ap2—3 to 9 inches; 60 percent brown (10YR 4/3) and 40 percent dark brown (10YR 3/3) silt loam, light brownish gray (10YR 6/2) dry; strong medium granular structure; friable; common fine and medium roots throughout; strongly acid; abrupt smooth boundary.

A—9 to 13 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; strong fine granular structure; friable; common fine and medium roots throughout; strongly acid; clear smooth boundary.

BA—13 to 17 inches; 60 percent yellowish brown (10YR 5/6) and 40 percent brown (10YR 4/3) silt loam; weak fine subangular blocky structure parting to weak fine granular; friable; few fine roots throughout; strongly acid; clear smooth boundary.

Bw—17 to 23 inches; yellowish brown (10YR 5/6) silt loam; weak medium subangular blocky structure; friable; few fine roots throughout; very strongly acid; clear smooth boundary.

C1—23 to 29 inches; yellowish brown (10YR 5/4) silt loam; massive; friable; strongly acid; clear smooth boundary.

C2—29 to 40 inches; yellowish brown (10YR 5/4) silt loam; massive; friable; very few faint brown (10YR 4/3) organic stains in root channels and pores; common fine distinct grayish brown (10YR 5/2) iron depletions; few fine spherical extremely weakly cemented iron-manganese accumulations; strongly acid; clear smooth boundary.

C3—40 to 60 inches; yellowish brown (10YR 5/4) silt loam; massive; friable; few faint very dark grayish brown (10YR 3/2) organic stains in root channels and pores; common fine distinct grayish brown (10YR 5/2) iron depletions; few fine spherical extremely weakly cemented iron-manganese accumulations; moderately acid.

Range in Characteristics

Depth to the base of the cambic horizon: 20 to 40 inches

Particle-size control section: Averages less than 18 percent clay and less than 15 percent fine sand or coarser sand

Reaction: Strongly acid or very strongly acid from below the surface layer to a depth of 40 inches and very strongly acid to neutral below a depth of 40 inches

Other characteristics: An irregular decrease in organic carbon content between the surface and a depth of 50 inches or an organic carbon content of 0.2 percent or more at a depth of 50 inches; some pedons have a buried A horizon below a depth of 40 inches

Ap and A horizons:

Hue—10YR
Value—3 to 5; 2 in some pedons in uncultivated areas
Chroma—2 to 4
Texture—silt loam

BA or Bw horizon:

Hue—10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam

C horizon:

Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 7
Chroma—2 to 6
Texture—silt loam; stratified loam, sandy loam, loamy sand, or sand in some pedons below a depth of 40 inches

Skelton Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Typic Hapludalfs

Typical Pedon

Skelton loam, on a slope of 1 percent in a cultivated field at an elevation of about 393 feet above mean sea level; 959 feet west and 690 feet north of the southeast corner of sec. 33, T. 1 S., R. 12 W.; Gibson County, Indiana; USGS East Mount Carmel, Indiana-Illinois, topographic quadrangle; lat. 38 degrees 22 minutes 47 seconds N. and long. 87 degrees 44 minutes 44 seconds W.; UTM Zone 16, Easting 434873, Northing 4248211; NAD 83:

Ap—0 to 11 inches; dark grayish brown (10YR 4/2) loam, light brownish gray (10YR 6/2) dry; weak fine subangular blocky structure; friable; many fine roots; neutral; abrupt smooth boundary.

Bt1—11 to 17 inches; yellowish brown (10YR 5/6) clay loam; weak medium and fine subangular blocky structure; friable; common fine roots; common distinct yellowish brown (10YR 5/4) clay films on faces of peds; few distinct dark grayish brown (10YR 4/2) organic stains on faces of peds; strongly acid; gradual smooth boundary.

Bt2—17 to 30 inches; yellowish brown (10YR 5/6) clay loam; weak fine prismatic structure parting to moderate medium subangular blocky; friable; common fine roots; many distinct brown (10YR 5/3) clay films on faces of peds; few fine prominent black (10YR 2/1) extremely weakly cemented iron-manganese accumulations; 1 percent gravel less than 1/4 inch in diameter; very strongly acid; gradual smooth boundary.

Bt3—30 to 42 inches; dark yellowish brown (10YR 4/4) clay loam; weak fine prismatic structure parting to moderate medium subangular blocky; firm; many distinct brown (10YR 4/3) clay films on faces of peds; common medium distinct black (10YR 2/1) extremely weakly cemented iron-manganese accumulations; 1 percent gravel less than 1/4 inch in diameter; very strongly acid; gradual smooth boundary.

Bt4—42 to 52 inches; dark yellowish brown (10YR 4/4) clay loam; weak fine prismatic structure parting to moderate fine subangular blocky; friable; many distinct brown (10YR 5/3) clay films on faces of peds; common fine faint brown (10YR 5/3) masses of oxidized iron; common medium distinct black (10YR 2/1) extremely weakly cemented iron-manganese accumulations; 1 percent gravel less than 1/4 inch in diameter; very strongly acid; gradual smooth boundary.

BC—52 to 60 inches; dark yellowish brown (10YR 4/4) clay loam; weak fine prismatic structure parting to weak fine subangular blocky; friable; many fine faint brown (10YR 5/3) masses of oxidized iron; common medium distinct black (10YR 2/1) extremely weakly cemented iron-manganese accumulations; 1 percent gravel less than 1/4 inch in diameter; strongly acid; gradual smooth boundary.

C—60 to 70 inches; yellowish brown (10YR 5/4) clay loam; massive; friable; many fine faint brown (10YR 5/3) iron depletions; strongly acid.

Range in Characteristics

Depth to the base of the argillic horizon: 50 to 80 inches

A horizon:
Hue—10YR
Value—4
Chroma—1 to 3
Texture—fine sandy loam or loam
Reaction—strongly acid to neutral

Bt horizon:
Hue—10YR
Value—4 or 5
Chroma—4 to 6
Texture—clay loam or sandy clay loam
Reaction—very strongly acid or strongly acid

BC horizon (if it occurs);
Hue—10YR
Value—4 or 5
Chroma—4 to 6
Texture—clay loam or sandy clay loam
Reaction—very strongly acid to moderately acid

C horizon:
Hue—10YR
Value—4 or 5
Chroma—4 to 6
Texture—clay loam or sandy clay loam
Reaction—very strongly acid to moderately acid

Springerton Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Typic Endoaquolls

Typical Pedon

Springerton loam, on a nearly level terrace in a cultivated field at an elevation of about 388 feet above mean sea level; 100 feet south and 2,500 feet west of the northeast corner of sec. 22, T. 4 S., R. 9 E.; White County, Illinois; USGS Centerville, Illinois, topographic quadrangle; lat. 38 degrees 10 minutes 10 seconds N. and long. 88 degrees 11 minutes 50 seconds W.; UTM Zone 16, Easting 395130, Northing 4225295; NAD 83:

Ap—0 to 9 inches; very dark gray (10YR 3/1) loam, dark gray (10YR 4/1) dry; moderate fine granular and moderate very fine subangular blocky structure; friable; few very fine roots; neutral; abrupt smooth boundary.

A—9 to 15 inches; very dark gray (10YR 3/1) loam, gray (10YR 5/1) dry; moderate fine subangular blocky structure; friable; few very fine roots; neutral; clear smooth boundary.

AB—15 to 19 inches; very dark grayish brown (10YR 3/2) loam; moderate fine subangular blocky structure; friable; few very fine roots; many fine distinct dark grayish brown (2.5Y 4/2) iron depletions; 2 percent gravel; neutral; clear smooth boundary.

Btg1—19 to 25 inches; dark grayish brown (2.5Y 4/2) loam; moderate fine subangular blocky structure; friable; few very fine roots; common distinct very dark grayish brown (10YR 3/2) clay films on faces of peds; few fine distinct dark yellowish brown (10YR 4/4) masses of oxidized iron; 2 percent gravel; neutral; gradual smooth boundary.

Btg2—25 to 35 inches; dark grayish brown (2.5Y 4/2) clay loam; friable; few very fine roots; few distinct dark gray (10YR 4/1) clay films on faces of peds; many fine and medium distinct dark yellowish brown (10YR 4/4) masses of oxidized iron; 2 percent gravel; neutral; clear smooth boundary.

Btg3—35 to 41 inches; light brownish gray (2.5Y 6/2) loam; moderate fine subangular blocky structure; friable; few very fine roots; few distinct dark gray (10YR 4/1) clay films on faces of peds; many fine prominent yellowish brown (10YR 5/6) masses of oxidized iron and few fine faint gray (10YR 5/1) iron depletions; few fine prominent

spherical reddish black (2.5YR 2.5/1) extremely weakly cemented iron-manganese accumulations; 3 percent gravel; neutral; clear smooth boundary.

Btg4—41 to 45 inches; light brownish gray (2.5Y 6/2) loam; moderate medium subangular blocky structure; friable; few very fine roots; few distinct dark gray (10YR 4/1) clay films on faces of peds and lining pores; common medium prominent olive yellow (2.5Y 6/6) and many medium prominent yellowish brown (10YR 5/6) masses of oxidized iron; 3 percent gravel; neutral; gradual smooth boundary.

Btg5—45 to 65 inches; grayish brown (2.5Y 5/2) loam with strata of sandy loam; weak medium prismatic structure; friable; few very fine roots; few distinct dark gray (10YR 4/1) clay films in pores; common medium distinct light olive brown (2.5Y 5/6) masses of oxidized iron and few fine faint grayish brown (2.5Y 5/2) iron depletions; 4 percent gravel; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Depth to the base of soil development: 40 to 80 inches

Ap, A, or AB horizon:
Hue—10YR
Value—2 to 3
Chroma—1 or 2
Texture—loam or clay loam
Reaction—strongly acid to neutral

Btg horizon (above a depth of 40 inches):
Hue—10YR, 2.5Y, 5Y, or N
Value—2 to 6
Chroma—0 to 2
Texture—commonly loam or clay loam; less commonly silt loam or silty clay loam
Reaction—strongly acid to neutral

Btg horizon (below a depth of 40 inches):
Hue—10YR, 2.5Y, 5Y, or N
Value—2 to 6
Chroma—0 to 2
Texture—stratified loam to sandy loam; thin strata of silt loam, silty clay loam, clay loam, loamy sand, or sand in some pedons
Reaction—strongly acid to neutral

Stonelick Series

Taxonomic classification: Coarse-loamy, mixed, superactive, calcareous, mesic Typic Udifluvents

Typical Pedon

Stonelick loam, on a flood plain in a cultivated field at an elevation of about 360 feet above mean sea level; 320 feet south and 1,100 feet west of the northeast corner of sec. 32, T. 5 S., R. 14 W., of the Second Principal Meridian; White County, Illinois; USGS Maunie, Illinois, topographic quadrangle; lat. 38 degrees 03 minutes 14 seconds N. and long. 88 degrees 00 minutes 04 seconds W.; UTM Zone 16, Easting 412176, Northing 4212281; NAD 83:

Ap—0 to 9 inches; brown (10YR 4/3) loam, brown (10YR 5/3) dry; weak very fine subangular blocky structure; friable; few very fine roots; very slightly effervescent; slightly alkaline; abrupt smooth boundary.

C1—9 to 16 inches; dark yellowish brown (10YR 4/4) sandy loam; massive; very friable; few very fine roots; very slightly effervescent; slightly alkaline; gradual smooth boundary.

C2—16 to 37 inches; dark yellowish brown (10YR 4/4) sandy loam; massive; very friable; few very fine roots; slightly effervescent; slightly alkaline; gradual smooth boundary.

C3—37 to 60 inches; dark yellowish brown (10YR 4/4), stratified sand, loamy sand, and sandy loam; massive; very friable; strongly effervescent; slightly alkaline.

Range in Characteristics

Ap or A horizon:

Hue—10YR
Value—3 to 5
Chroma—1 to 4
Texture—sandy loam, loam, or fine sandy loam
Reaction—slightly alkaline or moderately alkaline
Other features—carbonates

C horizon:

Hue—7.5YR or 10YR
Value—4 to 6
Chroma—2 to 4
Texture—stratified with dominant textures of loam, sandy loam, silt loam, fine sandy loam, sand, or loamy sand; loamy sand makes up a total thickness of 15 inches or less within the particle-size control section
Reaction—slightly alkaline or moderately alkaline
Other features—carbonates

Stoy Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Fragiaquic Hapludalfs

Typical Pedon

Stoy silt loam, in a nearly level area in a cultivated field at an elevation of about 389 feet above mean sea level; about 1,320 feet east of the southwest corner of sec. 28, T. 7 S., R. 8 E.; Gallatin County, Illinois; USGS Norris City, Illinois, topographic quadrangle; lat. 37 degrees 52 minutes 45 seconds N. and long. 88 degrees 19 minutes 58 seconds W.; UTM Zone 16, Easting 382795, Northing 4193237; NAD 83:

Ap—0 to 6 inches; brown (10YR 4/3) silt loam; weak fine granular structure; friable; many roots; few fine iron-manganese concretions throughout; very strongly acid; abrupt smooth boundary.

E1—6 to 9 inches; mixed light yellowish brown (10YR 6/4) and yellowish brown (10YR 5/4) silt loam; weak thin platy structure parting to weak fine granular; friable; common roots; common very dark grayish brown (10YR 3/2) organic stains; few medium distinct light brownish gray (10YR 6/2) iron depletions in the matrix; many fine iron-manganese concretions throughout; very strongly acid; clear smooth boundary.

E2—9 to 13 inches; yellowish brown (10YR 5/4) silt loam; weak fine and medium granular structure; friable; common roots; common medium distinct light brownish gray (10YR 6/2) iron depletions and yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; many fine iron-manganese concretions throughout; very strongly acid; clear smooth boundary.

BE—13 to 16 inches; yellowish brown (10YR 5/6) silty clay loam; weak fine and medium subangular blocky structure; friable; common roots; few medium

prominent light brownish gray (10YR 6/2) iron depletions in the matrix; many fine iron-manganese concretions throughout; very strongly acid; clear smooth boundary.

Bt1—16 to 24 inches; yellowish brown (10YR 5/8) silty clay loam; moderate fine subangular blocky structure; firm; common roots; common prominent brown (10YR 4/3) clay films on faces of peds; common prominent light brownish gray (10YR 6/2) clay depletions on faces of peds, light gray (10YR 7/1) dry; few fine prominent light brownish gray (10YR 6/2) and brown (10YR 5/3) iron depletions in the matrix; many fine iron-manganese concretions throughout; very strongly acid; clear smooth boundary.

Bt2—24 to 27 inches; yellowish brown (10YR 5/8 and 5/4) silty clay loam; moderate coarse subangular blocky structure parting to moderate fine and very fine angular blocky; firm; common roots; many prominent light brownish gray (10YR 6/2) clay depletions on faces of the larger peds and many distinct brown (10YR 4/3) clay films on faces of the smaller angular peds; few fine prominent light gray (10YR 7/1) iron depletions in the matrix; many medium iron-manganese concretions throughout; many black (10YR 2/1) threadlike manganese coatings and spherical manganese masses; very strongly acid; clear smooth boundary.

Bt3—27 to 32 inches; yellowish brown (10YR 5/8 and 5/4) silty clay loam; moderate medium subangular blocky structure; very firm; common roots; many distinct brown (10YR 4/3) clay films on faces of peds; few fine prominent light gray (10YR 7/1) and light brownish gray (10YR 6/2) iron depletions in the matrix; many fine iron-manganese concretions throughout; common black (10YR 2/1) threadlike manganese coatings and spherical manganese masses; very strongly acid; gradual smooth boundary.

Btx1—32 to 36 inches; mottled grayish brown (10YR 5/2), brown (10YR 5/3), and yellowish brown (10YR 5/8) silty clay loam; weak coarse subangular blocky structure; firm; common roots; common distinct brown (10YR 4/3) clay films on faces of peds; few fine distinct light gray (10YR 7/1) iron depletions in the matrix; many fine iron-manganese concretions throughout; brittle; very strongly acid; gradual smooth boundary.

Btx2—36 to 45 inches; mottled grayish brown (10YR 5/2), brown (10YR 5/3), and yellowish brown (10YR 5/8) silty clay loam; weak coarse prismatic structure; extremely firm; few roots; few distinct brown (10YR 4/3) clay films on faces of peds; common fine and medium distinct light gray (10YR 7/1) iron depletions in the matrix; many fine iron-manganese concretions throughout; brittle; very strongly acid; gradual smooth boundary.

Bx—45 to 80 inches; mottled grayish brown (10YR 5/2), pale brown (10YR 6/3), yellowish brown (10YR 5/8), and light gray (10YR 7/1) silt loam; weak medium prismatic structure; extremely firm; few very dark grayish brown (10YR 3/2) threadlike manganese coatings and spherical manganese masses; many fine iron-manganese concretions throughout; brittle; very strongly acid.

Range in Characteristics

Depth to fragic soil properties: 25 to 45 inches
Depth to the base of the argillic horizon: 35 to 65 inches
Particle-size control section: Averages 27 to 35 percent clay
Series control section: Less than 10 percent fine sand or coarser material throughout the profile

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—2 or 3

Texture—silt loam
Reaction—very strongly acid to neutral

A horizon (in undisturbed areas):
Hue—10YR
Value—2 to 3
Chroma—1 or 2
Texture—commonly silt loam; less commonly silty clay loam
Reaction—very strongly acid to neutral

E, BE, and B/E horizons:
Hue—10YR
Value—5 or 6
Chroma—3 or 4
Texture—commonly silt loam; silty clay loam in some BE horizons
Reaction—very strongly acid to neutral

Bt horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 8
Texture—silty clay loam or silt loam
Reaction—very strongly acid or strongly acid

Btx and Bx horizons:
Hue—10YR
Value—5 to 7
Chroma—2 to 8
Texture—silty clay loam or silt loam
Content of clay—24 to 35 percent
Reaction—very strongly acid or strongly acid

C horizon (if it occurs):
Hue—10YR
Value—5 to 7
Chroma—1 to 8
Texture—silt loam
Content of clay—20 to 27 percent
Reaction—very strongly acid to neutral

Sylvan Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Sylvan silt loam, on a moderately steep backslope in a cultivated field at an elevation of about 490 feet above mean sea level; approximately 800 feet east and 780 feet north of the southwest corner of sec. 17, T. 1 N., R. 9 W.; St. Clair County, Illinois; USGS Cahokia, Illinois-Missouri, topographic quadrangle; lat. 38 degrees 31 minutes 51 seconds N. and long. 90 degrees 07 minutes 32 seconds W.; UTM Zone 15, Easting 750562, Northing 4268632; NAD 83:

Ap—0 to 5 inches; mixed brown (10YR 4/3) and dark yellowish brown (10YR 4/4) silt loam, pale brown (10YR 6/3) dry; weak fine subangular blocky structure parting to moderate fine granular; friable; common very fine roots; about 26 percent clay; slightly acid; abrupt smooth boundary.

Bt1—5 to 10 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine subangular blocky structure; firm; common very fine roots; many distinct dark brown (10YR 3/3) organoargillans on faces of peds; about 32 percent clay; slightly acid; clear smooth boundary.

Bt2—10 to 19 inches; dark yellowish brown (10YR 4/6) silty clay loam; weak fine and medium subangular blocky structure; friable; few very fine roots; few fine continuous tubular pores; common distinct brown (10YR 4/3) clay films on faces of peds; few fine prominent spherical black (10YR 2/1) manganese masses with sharp boundaries; about 29 percent clay; slightly acid; gradual smooth boundary.

BCt—19 to 25 inches; yellowish brown (10YR 5/6) silt loam; weak medium subangular blocky structure; friable; few very fine roots; few fine continuous tubular pores; few faint yellowish brown (10YR 5/4) clay films on faces of peds; few fine prominent spherical black (10YR 2/1) manganese masses with sharp boundaries; about 25 percent clay; neutral; clear smooth boundary.

C1—25 to 38 inches; yellowish brown (10YR 5/4) silt loam; massive; very friable; few very fine roots; few very fine vesicular pores; common fine faint pale brown (10YR 6/3) iron depletions and common fine distinct yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; common fine distinct spherical black (10YR 2/1) manganese masses with clear strong brown (7.5YR 4/6) boundaries; about 20 percent clay; slightly effervescent; slightly alkaline; gradual smooth boundary.

C2—38 to 54 inches; brown (10YR 5/3) silt loam; massive; very friable; few very fine roots; few very fine vesicular pores; common fine faint light brownish gray (10YR 6/2) iron depletions and common fine distinct yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; common fine distinct irregular black (10YR 2/1) manganese masses with clear strong brown (7.5YR 4/6) boundaries; about 18 percent clay; slightly effervescent; moderately alkaline; gradual smooth boundary.

C3—54 to 80 inches; light yellowish brown (2.5Y 6/3) silt loam; massive; very friable; few very fine vesicular pores; common fine faint light brownish gray (2.5Y 6/2) iron depletions and common fine prominent dark yellowish brown (10YR 4/6) masses of oxidized iron in the matrix; few fine prominent irregular black (10YR 2/1) manganese masses with clear strong brown (7.5YR 4/6) boundaries; about 17 percent clay; slightly effervescent; moderately alkaline.

Range in Characteristics

Depth to the base of the argillic horizon: Typically 22 to 35 inches; ranges to 40 inches in some pedons

Depth to carbonates: 22 to 40 inches

Particle-size control section: Averages 25 to 35 percent clay and less than 15 percent sand

Other features: Some pedons have an EB or BE horizon.

Ap or A horizon:

Hue—10YR
Value—3 to 6
Chroma—2 to 4
Texture—silt loam; silty clay loam in some pedons in eroded areas
Reaction—moderately acid to neutral

E horizon (if it occurs):

Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam
Reaction—moderately acid to neutral

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silty clay loam; subhorizons of silt loam in some pedons
Reaction—moderately acid to neutral

BCt horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam; less commonly silty clay loam
Reaction—moderately acid to slightly alkaline

C horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 6
Texture—silt loam or silt
Reaction—neutral to moderately alkaline

Uniontown Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Oxyaquic Hapludalfs

Typical Pedon

Uniontown silt loam, on a concave slope of 1 percent in a cultivated field at an elevation of about 400 feet above mean sea level; west of Owensboro, Kentucky, 0.9 mile north of the intersection of Kentucky Highway 56 and Lyddane Bridge Road, 0.2 mile southwest of the intersection of Lee Rudy Road and Lyddane Bridge Road, 400 feet west of Lyddane Bridge Road; Daviess County, Kentucky; USGS Owensboro West, Kentucky, topographic quadrangle; lat. 37 degrees 46 minutes 13.7 seconds N. and long. 87 degrees 12 minutes 38.7 seconds W.; UTM Zone 16, Easting 481439, Northing 4180370; NAD 83:

Ap—0 to 9 inches; dark grayish brown (10YR 4/2) silt loam; weak fine granular structure; very friable; few fine roots; neutral; abrupt smooth boundary.

Bt1—9 to 12 inches; yellowish brown (10YR 5/4) silt loam; weak and moderate medium subangular blocky structure; friable; few fine roots; few faint brown (10YR 4/3) clay films and light brownish gray (10YR 6/2) silt coatings on faces of peds; moderately acid; clear smooth boundary.

Bt2—12 to 22 inches; yellowish brown (10YR 5/6) silty clay loam; moderate medium prismatic structure parting to moderate fine and medium angular blocky; firm; few fine roots between prisms; many prominent brown (10YR 4/3) clay films on faces of prisms and secondary peds; few fine prominent black (10YR 2/1) manganese coatings on some peds; moderately acid; gradual smooth boundary.

Bt3—22 to 34 inches; light olive brown (2.5Y 5/4) silt loam; moderate coarse prismatic structure parting to moderate fine and medium angular blocky; friable; common fine prominent brown (10YR 4/3) clay films on prism faces; few fine prominent black (10YR 2/1) iron-manganese concretions; many medium prominent yellowish brown (10YR 5/8) masses of oxidized iron; neutral; gradual smooth boundary.

Cg1—34 to 46 inches; grayish brown (2.5Y 5/2) silt loam; massive; friable; few fine and medium prominent white (10YR 8/1) calcium carbonate concretions; many medium prominent yellowish brown (10YR 5/6) masses of oxidized iron; slightly alkaline; gradual smooth boundary.

Cg2—46 to 65 inches; light brownish gray (2.5Y 6/2) silt loam; massive; very friable; common fine and medium distinct white (10YR 8/1) calcium carbonate concretions; common medium prominent yellowish brown (10YR 5/6) and strong brown (7.5YR 5/8) masses of oxidized iron; moderately alkaline.

Range in Characteristics

Depth to the base of the argillic horizon: 20 to 40 inches
Other characteristics: Some pedons have a thin BA, BE, or E horizon of silt loam or silty clay loam.

Ap horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 4
Texture—silt loam or silty clay loam
Reaction—strongly acid to neutral

Bt horizon:
Hue—10YR or 2.5Y
Value—4 or 5
Chroma—4 to 6
Texture—silt loam or silty clay loam
Reaction—strongly acid to slightly alkaline

Cg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 or 2
Texture—commonly silt loam or silty clay loam; stratified loam, clay loam, or silty clay in some pedons
Reaction—neutral to moderately alkaline

Wakeland Series

Taxonomic classification: Coarse-silty, mixed, superactive, nonacid, mesic Aeric Fluvaquents

Typical Pedon

Wakeland silt loam, on a nearly level flood plain in a cultivated field at an elevation of about 485 feet above mean sea level; about 1,600 feet north and 1,330 feet east of the center of sec. 34, T. 4 N., R. 5 W.; Madison County, Illinois; USGS Grantfork, Illinois, topographic quadrangle; lat. 38 degrees 45 minutes 18 seconds N. and long. 89 degrees 38 minutes 27 seconds W.; UTM Zone 16, Easting 270517, Northing 4292906; NAD 83:

Ap—0 to 8 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; very thin lenses of light gray (10YR 7/1) silt and very fine sand; weak fine granular structure; friable; many very fine and few fine roots; few fine continuous tubular pores; neutral; clear smooth boundary.
Cg1—8 to 34 inches; dark grayish brown (10YR 4/2) silt loam; thin lenses of light brownish gray (10YR 6/2) silt and very fine sand; massive; friable; few very fine roots; common very fine and fine continuous tubular pores; few fine prominent yellowish brown (10YR 5/8) masses of oxidized iron in the matrix; neutral; gradual smooth boundary.

Cg2—34 to 44 inches; dark grayish brown (10YR 4/2) silt loam; massive; friable; few very fine roots; few very fine continuous tubular pores; common medium faint light brownish gray (10YR 6/2) iron depletions and common medium prominent strong brown (7.5YR 5/6) masses of oxidized iron in the matrix; neutral; clear smooth boundary.

Cg3—44 to 68 inches; grayish brown (10YR 5/2) silt loam; massive; friable; common medium faint dark grayish brown (10YR 4/2) and light brownish gray (10YR 6/2) iron depletions and common fine prominent strong brown (7.5YR 5/6) masses of oxidized iron in the matrix; few medium prominent spherical dark brown (7.5YR 3/2) iron-manganese nodules; slightly acid; clear smooth boundary.

Ab—68 to 80 inches; very dark grayish brown (10YR 3/2) silt loam; moderate fine subangular blocky structure; friable; few fine faint spherical black (10YR 2/1) iron-manganese nodules; slightly acid.

Range in Characteristics

Particle-size control section: Averages 10 to 18 percent clay and less than 15 percent fine sand or coarser material

Depth to a buried soil (if it occurs): More than 60 inches

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam
Reaction—moderately acid to neutral

A horizon (if it occurs):
Hue—10YR
Value—3 or 4
Chroma—1
Texture—silt loam
Thickness—1 to 3 inches
Reaction—moderately acid to neutral

C or Cg horizon (upper part):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—1 to 4
Texture—silt loam
Reaction—moderately acid to slightly alkaline

C or Cg horizon (lower part):
Hue—10YR or 2.5Y
Value—4 to 7
Chroma—1 to 6
Texture—silt loam; loam and thin strata of fine sandy loam or sandy loam below a depth of 40 inches
Reaction—moderately acid to slightly alkaline

Ab horizon (if it occurs):
Hue—10YR
Value—2 to 3
Chroma—1 or 2
Texture—silt loam
Reaction—moderately acid to slightly alkaline

Weir Series

Taxonomic classification: Fine, smectitic, mesic Typic Endoaqualfs

Typical Pedon

Weir silt loam, in a nearly level area in a cultivated field at an elevation of about 495 feet above mean sea level; about 200 feet south and 50 feet east of the northwest corner of sec. 2, T. 3 N., R. 12 W.; Lawrence County, Illinois; USGS Lawrenceville, Illinois, topographic quadrangle; lat. 38 degrees 43 minutes 53 seconds N. and long. 87 degrees 43 minutes 18 seconds W.; UTM Zone 16, Easting 437271, Northing 4287222; NAD 83:

Ap—0 to 8 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; weak fine granular structure; friable; moderately acid; abrupt smooth boundary.

Eg—8 to 17 inches; light brownish gray (10YR 6/2) silt loam; weak thin platy structure; friable; few medium distinct light yellowish brown (10YR 6/4) masses of oxidized iron in the matrix; very strongly acid; clear smooth boundary.

Btg1—17 to 21 inches; gray (10YR 5/1) silty clay loam; weak medium prismatic structure parting to moderate medium angular blocky; firm; common distinct grayish brown (10YR 5/2) clay films on faces of peds; common medium distinct brown (10YR 5/3) and yellowish brown (10YR 5/4) masses of oxidized iron in the matrix; very strongly acid; clear smooth boundary.

Btg2—21 to 30 inches; gray (10YR 5/1) silty clay loam; moderate medium prismatic structure parting to moderate medium angular blocky; firm; common distinct grayish brown (10YR 5/2) clay films on faces of peds; many medium distinct yellowish brown (10YR 5/4) masses of oxidized iron in the matrix; very strongly acid; gradual smooth boundary.

Btg3—30 to 39 inches; gray (10YR 5/1) silty clay loam; moderate medium subangular blocky structure; firm; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; many medium distinct yellowish brown (10YR 5/4) masses of oxidized iron in the matrix; very strongly acid; gradual smooth boundary.

BCg—39 to 46 inches; gray (10YR 6/1) silt loam; weak coarse subangular blocky structure; firm; few faint dark grayish brown (10YR 4/2) clay films on faces of peds; many medium distinct yellowish brown (10YR 5/4) masses of oxidized iron in the matrix; strongly acid; gradual smooth boundary.

Cg—46 to 80 inches; light brownish gray (10YR 6/2) silt loam; massive; friable; many medium prominent yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; moderately acid.

Range in Characteristics

Depth to the base of the argillic horizon: 35 to more than 60 inches

Particle-size control section: Averages 35 to 40 percent clay; as much as 45 percent in individual subhorizons

Series control section: Less than 10 percent fine sand or coarser material

Other characteristics: Some pedons have a BE horizon.

Ap or A horizon:

Hue—10YR

Value—4 or 5

Chroma—1 or 2

Texture—silt loam

Reaction—very strongly acid to moderately acid; ranges to neutral in areas that have been limed

Eg horizon:
Hue—10YR or 2.5Y
Value—5 to 7
Chroma—2
Texture—silt loam
Reaction—very strongly acid to moderately acid; ranges to neutral in areas that have been limed

Btg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 or 2
Texture—silty clay loam or silty clay
Reaction—very strongly acid or strongly acid

BCg horizon (if it occurs):
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 or 2
Texture—silt loam or silty clay loam
Content of clay—20 to 30 percent
Reaction—very strongly acid to moderately acid

Cg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 2
Texture—silt loam
Content of clay—20 to 27 percent
Reaction—very strongly acid to slightly acid

Wellston Series

Taxonomic classification: Fine-silty, mixed, active, mesic Ultic Hapludalfs

Typical Pedon

Wellston silt loam, on a shoulder slope in an area of mixed hardwoods at an elevation of about 485 feet above mean sea level; about 1,835 feet west and 785 feet north of the center of sec. 26, T. 7 S., R. 6 W.; Randolph County, Illinois; USGS Welge, Illinois, topographic quadrangle; lat. 37 degrees 53 minutes 38 seconds N. and long. 89 degrees 44 minutes 25 seconds W.; UTM Zone 16, Easting 259030, Northing 4197589; NAD 83:

A—0 to 3 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; moderate medium granular structure; friable; about 5 percent sandstone channers; slightly acid; abrupt smooth boundary.

E—3 to 8 inches; yellowish brown (10YR 5/4) silt loam, very pale brown (10YR 7/4) dry; weak medium platy structure; friable; about 3 percent sandstone channers; moderately acid; clear smooth boundary.

Bt1—8 to 17 inches; strong brown (7.5YR 5/6) silt loam; moderate fine and medium subangular blocky structure; friable; many distinct brown (7.5YR 4/4) clay films on faces of peds; about 3 percent sandstone channers; strongly acid; clear smooth boundary.

Bt2—17 to 31 inches; strong brown (7.5YR 5/6) silt loam; moderate and strong medium subangular blocky structure; firm; common distinct brown (7.5YR 4/4) clay

films and many distinct pinkish gray (7.5YR 6/2) silt coatings on faces of peds; about 5 percent sandstone channers; strongly acid; gradual smooth boundary.

Bt3—31 to 43 inches; strong brown (7.5YR 5/6) silt loam; moderate medium and coarse subangular blocky structure; firm; common distinct brown (7.5YR 4/4) clay films on faces of peds and common distinct pinkish gray (7.5YR 6/2) silt coatings on vertical faces of peds; about 10 percent sandstone channers; moderately acid; gradual smooth boundary.

2BCt—43 to 49 inches; strong brown (7.5YR 5/6) channery silt loam; weak coarse subangular blocky structure; firm; few faint brown (7.5YR 4/4) clay films on faces of peds and common distinct pinkish gray (7.5YR 6/2) silt coatings on vertical faces of peds; few very dark gray (N 3/) organoargillans lining root channels; about 20 percent sandstone channers; moderately acid; clear irregular boundary.

2C—49 to 60 inches; brown (7.5YR 5/4) very channery loam; massive; friable; about 55 percent sandstone and siltstone channers and flagstones; strongly acid; clear wavy boundary.

2R—60 inches; unweathered sandstone bedrock.

Range in Characteristics

Depth to the base of soil development: 32 to 55 inches
Depth to lithic or paralithic contact: 40 to 72 inches
Other characteristics: Some pedons have a B/E horizon.

Ap horizon:
Hue—7.5YR or 10YR
Value—4 or 5 (6 or 7 dry)
Chroma—typically 2 or 3; 4 to 6 in eroded areas
Texture—silt loam; silty clay loam in severely eroded areas
Reaction—strongly acid to slightly acid

A horizon (in uncultivated areas):
Hue—10YR
Value—2 to 4 (4 to 6 dry)
Chroma—1 to 3
Texture—silt loam
Reaction—strongly acid to slightly acid

E horizon:
Hue—10YR
Value—4 to 6 (6 to 8 dry)
Chroma—3 or 4
Texture—silt loam
Reaction—strongly acid to slightly acid

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 8
Texture—silty clay loam or silt loam
Reaction—very strongly acid to moderately acid

2Bt, 2BCt, or 2BC horizon (if it occurs):
Hue—7.5YR, 10YR, or 2.5Y
Value—4 or 5
Chroma—3 to 6
Texture—silt loam, silty clay loam, clay loam, or loam or the channery, very channery, gravelly, or very gravelly analogs of these textures
Reaction—very strongly acid to moderately acid

2C or 2Cr horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 or 5
Chroma—3 to 6
Texture—the gravelly to extremely gravelly or channery to extremely channery analogs of loam, silt loam, clay loam, sandy clay loam, or sandy loam
Reaction—very strongly acid to moderately acid

2R layer:
Kind of bedrock—dominantly unweathered sandstone or siltstone; shale in some pedons

Wynoose Series

Taxonomic classification: Fine, smectitic, mesic Typic Albaqualfs

Typical Pedon

Wynoose silt loam, in a nearly level area in a cultivated field at an elevation of about 455 feet above mean sea level; 967 feet west and 2,458 feet north of the southeast corner of sec. 10, T. 1 N., R. 8 E.; Wayne County, Illinois; USGS Enterprise, Illinois, topographic quadrangle; lat. 38 degrees 31 minutes 57.4 seconds N. and long. 88 degrees 17 minutes 50.3 seconds W.; UTM Zone 16, Easting 386926, Northing 4265710; NAD 83:

Ap—0 to 7 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; moderate fine granular structure; friable; common very fine roots throughout; common fine distinct brown (7.5YR 4/4) extremely weakly cemented iron-manganese accumulations in the matrix; few fine distinct spherical brown (7.5YR 4/4) extremely weakly cemented iron-manganese accumulations throughout; neutral; abrupt smooth boundary.

Eg1—7 to 14 inches; light brownish gray (10YR 6/2) silt loam, white (2.5Y 8/1) dry; moderate medium platy structure; friable; few very fine roots throughout; common distinct light gray (10YR 7/2) silt coatings on faces of peds; common fine prominent strong brown (7.5YR 5/6) and yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; few fine distinct spherical brown (7.5YR 4/4) extremely weakly cemented iron-manganese accumulations throughout; strongly acid; clear smooth boundary.

Eg2—14 to 20 inches; light brownish gray (10YR 6/2) silt loam, white (2.5Y 8/1) dry; moderate medium platy structure; friable; few very fine roots throughout; common distinct light gray (10YR 7/2) silt coatings on faces of peds; many fine prominent strong brown (7.5YR 5/6) masses of oxidized iron in the matrix; few fine distinct spherical brown (7.5YR 4/4) extremely weakly cemented iron-manganese accumulations throughout; few fine prominent irregular reddish black (2.5YR 2.5/1) iron-manganese concretions throughout; very strongly acid; abrupt smooth boundary.

Btg1—20 to 29 inches; light brownish gray (10YR 6/2) silty clay; strong medium prismatic structure parting to strong medium angular blocky; firm; few very fine roots along faces of peds; many distinct gray (10YR 5/1) clay films and common distinct light gray (10YR 7/2) silt coatings on faces of peds; many fine and medium prominent strong brown (7.5YR 5/6) masses of oxidized iron in the matrix; common fine distinct spherical brown (7.5YR 4/4) extremely weakly cemented iron-manganese accumulations throughout; common fine and medium prominent irregular reddish black (2.5YR 2.5/1) iron-manganese concretions throughout; very strongly acid; clear smooth boundary.

Btg2—29 to 36 inches; light brownish gray (10YR 6/2) silty clay; strong medium prismatic structure parting to strong medium angular blocky; firm; few very fine roots along faces of peds; common distinct gray (10YR 5/1) clay films and few distinct light gray (10YR 7/2) silt coatings on faces of peds; many fine and medium prominent strong brown (7.5YR 5/6) masses of oxidized iron in the matrix; few fine distinct spherical brown (7.5YR 4/4) extremely weakly cemented iron-manganese accumulations throughout; few fine prominent irregular reddish black (2.5YR 2.5/1) iron-manganese concretions throughout; very strongly acid; clear smooth boundary.

2Btg3—36 to 48 inches; light brownish gray (10YR 6/2) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few very fine roots along faces of peds; few distinct grayish brown (10YR 5/2) clay films and few distinct light gray (10YR 7/2) silt coatings on faces of peds; common fine and medium prominent strong brown (7.5YR 5/6) masses of oxidized iron in the matrix; few fine distinct spherical brown (7.5YR 4/4) extremely weakly cemented iron-manganese accumulations throughout; few fine prominent irregular reddish black (2.5YR 2.5/1) iron-manganese concretions throughout; about 2 percent angular gravel by volume; strongly acid; clear smooth boundary.

2Btg4—48 to 66 inches; gray (10YR 6/1) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few very fine roots along faces of peds; few distinct gray (10YR 5/1) clay films on faces of peds and few distinct dark grayish brown (10YR 4/2) clay films in root channels and pores; common fine and medium prominent strong brown (7.5YR 5/8) masses of oxidized iron in the matrix; few fine prominent irregular reddish black (2.5YR 2.5/1) iron-manganese concretions throughout; about 2 percent angular gravel by volume; strongly acid; clear smooth boundary.

3Btgb—66 to 80 inches; gray (10YR 6/1) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; very firm; common distinct gray (10YR 5/1) clay films on faces of peds and common prominent black (N 2.5/) manganese coatings on faces of peds; common fine and medium prominent strong brown (7.5YR 5/6 and 5/8) masses of oxidized iron in the matrix; common medium prominent irregular reddish black (2.5YR 2.5/1) iron-manganese concretions throughout; about 5 percent angular gravel by volume; moderately acid.

Range in Characteristics

Thickness of the loess: 30 to 55 inches
Depth to the base of the argillic horizon: More than 40 inches
Particle-size control section: Averages 35 to 42 percent clay and less than 15 percent sand

Ap or A horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 or 2
Texture—silt loam
Reaction—strongly acid; ranges to neutral in areas that have been limed

Eg horizon:
Hue—10YR or 2.5Y
Value—5 to 7
Chroma—1 or 2
Texture—silt loam
Reaction—extremely acid to neutral

Btg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 or 2
Texture—silty clay loam or silty clay
Reaction—extremely acid to moderately acid

2Btg or 2BCg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 or 2
Texture—silt loam, silty clay loam, or clay loam
Content of rock fragments—0 to 5 percent
Reaction—extremely acid to moderately acid

3Agb and/or 3Btgb horizon:
Hue—7.5YR, 10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 or 2
Texture—silt loam, silty clay loam, or clay loam
Content of rock fragments—0 to 10 percent
Reaction—moderately acid to slightly alkaline

Zanesville Series

Taxonomic classification: Fine-silty, mixed, active, mesic Oxyaquic Fragiudalfs

Typical Pedon

Zanesville silt loam, on a smooth, convex ridgetop in a cultivated field at an elevation of about 571 feet above mean sea level; approximately 1/4 mile north of Needmore, along the west side of Kentucky Highway 293, about 300 feet south of Liberty Church; Caldwell County, Kentucky; USGS Olney, Kentucky, topographic quadrangle; lat. 37 degrees 13 minutes 34 seconds N. and long. 87 degrees 50 minutes 42 seconds W.; UTM Zone 16, Easting 425044, Northing 4120291; NAD 83:

Ap—0 to 7 inches; brown (10YR 4/3) silt loam; weak fine granular structure; very friable; many fine roots; moderately acid; abrupt smooth boundary.

Bt—7 to 28 inches; strong brown (7.5YR 5/6) silt loam; moderate medium subangular blocky structure; friable; common fine roots; common faint brown (10YR 5/3) and reddish brown (5YR 5/4) clay films on faces of peds; few fine black (N 2.5/) iron-manganese concretions; very strongly acid; clear wavy boundary.

Btx—28 to 39 inches; yellowish brown (10YR 5/4) silt loam; many medium distinct gray (10YR 6/1) and strong brown (7.5YR 5/6) mottles; moderate very coarse prismatic structure parting to weak medium subangular blocky; very firm; few fine roots between prisms; many distinct gray (10YR 6/1) silt coatings and clay films on vertical faces of peds and common faint brown (10YR 5/3) and common distinct reddish brown (5YR 5/4) clay films on faces of peds; few fine black (N 2.5/) iron-manganese concretions; brittle in 60 percent of the matrix; very strongly acid; gradual wavy boundary.

2BC—39 to 60 inches; yellowish brown (10YR 5/4) sandy clay loam; common medium distinct light brownish gray (2.5Y 6/2) and light yellowish brown (10YR 6/4) mottles; weak thick platy structure; firm; few fine black (N 2.5/) iron-manganese

concretions; 10 percent weathered brown fragments of sandstone and siltstone; very strongly acid; clear wavy boundary.

2R—60 inches; gray and brown, acid sandstone and siltstone.

Range in Characteristics

Depth to the fragipan: 20 to 32 inches
Thickness of the solum: 35 to 70 inches
Depth to bedrock: 40 to 80 inches
Reaction: Moderately acid to very strongly acid, except in areas that have been limed

Ap horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—2 to 4
Texture—typically silt loam; silty clay loam in some severely eroded areas

A horizon (in uncultivated areas):
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—1 to 4
Texture—silt loam
Thickness—1 to 3 inches

E horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—silt loam

Bt horizon:
Hue—5YR, 7.5YR, or 10YR
Value—4 or 5
Chroma—4 to 6
Texture—silt loam or silty clay loam

Btx or 2Btx horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—commonly silt loam or silty clay loam; less commonly loam, clay loam, sandy clay loam, or fine sandy loam
Content of rock fragments—0 to 15 percent

2C, 3C, 2BC, or 3BC horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—silty clay loam, silt loam, loam, clay loam, sandy clay loam, or fine sandy loam or the gravelly, channery, or very channery analogs of these textures
Content of rock fragments—5 to 50 percent

2Cr or 3Cr horizon (if it occurs):
Kind of material—interbedded sandstone, siltstone, or shale, paralithic (rippable)

2R or 3R layer:
Kind of bedrock—sandstone or siltstone, lithic (hard)

Zipp Series

Taxonomic classification: Fine, mixed, active, nonacid, mesic Typic Endoaquepts

Typical Pedon

Zipp silty clay loam, in a nearly level area in a cultivated field at an elevation of about 390 feet above mean sea level; approximately 200 feet north and 1,200 feet east of the southwest corner of sec. 28, T. 6 S., R. 8 W.; Warrick County, Indiana; USGS Yankeetown, Indiana, topographic quadrangle; lat. 37 degrees 57 minutes 42 seconds N. and long. 87 degrees 19 minutes 05 seconds W.; UTM Zone 16, Easting 472061, Northing 4201615; NAD 83:

Ap—0 to 10 inches; dark grayish brown (10YR 4/2) silty clay loam, light brownish gray (10YR 6/2) dry; moderate fine granular structure; firm; neutral; abrupt smooth boundary.

Bg1—10 to 15 inches; dark gray (5Y 4/1) silty clay loam; moderate fine angular blocky structure; firm; many faint dark gray (5Y 4/1) pressure faces on vertical faces of peds; many fine prominent yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; neutral; clear wavy boundary.

Bg2—15 to 35 inches; gray (5Y 5/1) silty clay loam; moderate medium prismatic structure parting to strong fine angular blocky; firm; many faint dark gray (5Y 4/1) pressure faces on vertical faces of peds; many fine prominent yellowish brown (10YR 5/6) and few fine prominent light olive brown (2.5Y 5/4) masses of oxidized iron in the matrix; neutral; clear wavy boundary.

Bg3—35 to 45 inches; dark gray (5Y 4/1) silty clay; moderate medium prismatic structure parting to moderate medium angular blocky; firm; many fine prominent yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; neutral; clear wavy boundary.

Cg—45 to 60 inches; gray (10YR 6/1) silty clay; massive; firm; many fine prominent yellowish brown (10YR 5/6) masses of oxidized iron in the matrix; neutral.

Range in Characteristics

Depth to the base of the cambic horizon: 36 to 48 inches

Ap horizon:
Hue—10YR
Value—4
Chroma—1 or 2
Texture—silty clay loam or silty clay; silt loam in the overwash phase
Reaction—moderately acid to neutral

Bg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 or 1
Texture—silty clay loam or silty clay
Reaction—moderately acid to neutral

Cg or C horizon:
Hue—10YR to 5Y or N
Value—4 to 7
Chroma—0 to 6
Texture—silty clay loam or silty clay; thin strata of silt loam in some pedons
Reaction—neutral to moderately alkaline

Formation of the Soils

This section relates the soils in the survey area to the major factors of soil formation and describes the processes of soil formation.

Factors of Soil Formation

Soil is produced by soil-forming processes, such as weathering and other geologic processes, acting on materials deposited or accumulated by geologic agents. The characteristics of the soil at any given point on the landscape depend upon five major soil-forming factors: parent material, climate, living organisms, relief, and time. Climate and living organisms are the active forces of soil formation. They act on the parent material accumulated through the weathering of rock and slowly change it into soil. All five factors come into play in the formation of every soil. The relative importance of each differs from place to place. In extreme cases, one factor may dominate in the formation of a soil and fix most of its properties. In general, however, it is the combined action of the five factors that determines the present character of each soil.

Parent Material

Parent material determines the textural, chemical, and mineralogical composition of the soil. The properties of the parent material vary greatly within small distances, depending on the source of the material. The major kinds of parent material in White County are loess, lacustrine deposits, outwash, alluvium, till, material weathered from bedrock, and organic deposits.

Loess, or silty wind-deposited material, is the most extensive parent material in White County. It blankets many of the other materials. The loess is about 200 inches thick in the south-central part of the county and 45 inches thick in the western part (Fehrenbacher and others, 1965). Most areas have two layers of loess. The upper layer is Peoria Loess, which is gray and yellowish brown silt loam when it is unweathered. The Peoria Loess is 12,000 to 25,000 years old (Hansel and Johnson, 1996). The lower layer is Roxana Loess, which generally is thinner than the Peoria Loess and contains more sand. The Roxana Loess is 28,000 to 60,000 years old (Hansel and Johnson, 1996). The Roxana Loess was weathered before it was covered by the Peoria Loess. The Roxana Loess has more influence on the modern soils in areas where it is closer to the surface and the layer of Peoria Loess is thinner. Ava and Bluford are examples of soils that formed in both kinds of loess. Alford and Hosmer are examples of soils that formed entirely in Peoria Loess.

Lacustrine material was deposited from still or slowly moving water. It is clayey or silty, depending on the speed of the water at the time of deposition. This material was deposited in glacial lakes 21,000 to 13,000 years ago (Frye and others, 1972). The lake plains of former Lake Little Wabash, Lake Skillet, and Lake Saline cover large areas of the county. These lakes formed when outwash from the Wisconsin glacier was carried down the valleys of the Wabash and Ohio Rivers and dammed old valleys. The height of the dams varied, and the lakes were filled during several episodes. The

lacustrine deposits are part of the Equality Formation. Patton and Zipp soils formed in this material. Some of the upper tributaries of the lake plains have been covered by more recent overwash. The rarely flooded, overwash phases of Patton and Zipp soils formed in the overwash and in the underlying lacustrine sediments.

Outwash material was deposited by glacial meltwater. It consists of strata made up of material of different particle sizes. The sorting of individual layers of the material is related to the stream velocity at the time of deposition. The coarser textured material was deposited as the water slowed down. The finer textured material was deposited in much more slowly moving or standing water. Outwash is extensive in the eastern part of the county, between the Little Wabash and Wabash Rivers. Skelton and Crawleyville are examples of soils that formed entirely in outwash. Ridgway and Sexton are examples of soils that formed in loess and in the underlying stratified outwash. In some areas, the outwash has been reworked by the wind and sand dunes have formed. Bloomfield soils are examples of soils that formed in these areas.

Alluvium is material recently deposited by floodwater from streams and rivers. The texture is determined by the velocity of the water that deposited the material. Alluvium occurs on the bottom land along Bear Creek, Grindstone Creek, and other streams in the county. It is mostly silt loam or silty clay loam. Belknap and Bonnie are examples of soils that formed in alluvium in these areas.

The bottom land along the Wabash River has the largest areas of alluvial soils in the county. The alluvium in these areas is less uniform than that along other streams in the county. The material occurs in a series of ridges and swales. The alluvium on the ridges is commonly loamy or silty. Landes and Armiesburg are examples of soils on the ridges or natural levees. The alluvium in the swales is commonly silty. Newark soils are examples of soils in the swales. Several old river channels or slackwater sloughs are on the bottom land. The alluvium in the sloughs generally is more clayey. Petrolia and Piopolis are examples of soils in the sloughs.

Till is material deposited directly by glaciers with a minimum of water action. It consists of mixed particles of different sizes. In White County, the till is generally silt loam or loam. In places it consists largely of sandstone fragments moved only a short distance by the glacier. The small pebbles in this parent material have sharp corners, indicating that they have not been worn by water. The southern limit of the Illinoian glacier is a few miles south of White County. Therefore, the till in the county is thin and discontinuous. Most areas of till have subsequently been covered by deposits of other kinds of parent material. Hickory soils formed in till.

Many of the prominent oval and oblong ridges in the northern part of the county have cores consisting of Hagarstown drift. This material was deposited and reworked by glacial meltwater in crevices of the ice sheet. It is loamy and sandy and has reddish colors throughout. Negley soils formed in Hagarstown drift, and Parke soils formed in loess and in the underlying Hagarstown drift.

Some soils in the county formed in material weathered from sedimentary bedrock, including sandstone, siltstone, and shale. Most of these soils are on steep side slopes. Berks soils formed in this material. Wellston soils formed in this material and in the overlying loess.

Organic material is made up of plant remains. Shallow lakes formed in sloughs left by the rivers. Water-tolerant plants, grasses, and sedges grew around these lakes. As these plants died, their remains became part of the organic accumulation. When the lakes eventually were filled with organic material, areas of muck formed. Houghton soils formed in organic material.

Plant and Animal Life

Soils are affected by the vegetation under which they form. The native vegetation in White County was deciduous hardwood trees, marsh grasses, and prairie grasses. Soils are commonly grouped as either forest soils or prairie soils. Forest soils have

a thin, relatively light-colored surface layer. The organic matter in the surface layer is derived mainly from the decomposition of leaf litter. Alford and Bluford soils formed under forest vegetation. Prairie soils have a thick, dark surface layer. Grasses have many fine, fibrous roots. The roots add large amounts of organic material to the soil when the grasses die and decompose. Meadowbank and Patton soils formed under grasses.

Other living organisms have influenced soil formation in White County. These include bacteria, fungi and other micro-organisms, earthworms, insects, and burrowing animals. These organisms help to decompose the organic material and mix and churn the soil.

Human activities also affect the formation of soils. In some areas of the county, farming has reduced the amount of organic matter in the surface soil and resulted in increased runoff and erosion. Dikes and levees reduce the frequency of flooding on some soils. The water table in some soils has been lowered by subsurface drains. The future formation of some soils could be greatly affected by human activities.

Relief

Variations in the slope of the land surface greatly influence the runoff rate, the rate of water infiltration, the extent of erosion, and the natural drainage of the soil.

A comparison between soils that formed in similar kinds of parent material but in areas of different topography and, therefore, under different drainage conditions shows the effect of slope on soil formation. Ava and Wynoose soils formed in similar kinds of parent material. Ava soils are gently sloping to strongly sloping, are moderately well drained, and have a brownish subsoil. Wynoose soils are nearly level, are poorly drained, and have a grayish subsoil. The difference in the color of the subsoil is affected by the degree of oxidation of certain mineral compounds, chiefly iron. In Wynoose and other nearly level or depressional soils, the water table is close to the surface nearly all year. The water in the pores restricts the circulation of air. Under these conditions, the iron is poorly oxidized and is gray or has been removed. The water table is lower in the more sloping Ava soils, and some of the rainfall runs off the surface. As a result, these soils are drier and have more air in their pores. The iron in the subsoil is better oxidized and is brown.

Relief determines the runoff rate and the susceptibility to erosion, both of which generally increase as the slope increases. In some areas erosion occurs so rapidly that the surface soil is removed as soon as a soil forms. The soils in these areas have weakly expressed horizons and generally are shallow over the underlying unweathered parent material. Sylvan soils are examples.

Time

Time greatly affects the degree of profile development in a soil. The influence of time can be modified by erosion, parent material, topography, and the deposition of material. Changes take place slowly in most kinds of parent material. The age of soils is determined by the degree of profile development. Soils that are characterized by little or no development are considered immature. Soils having well expressed horizons are considered mature even if the age of the parent material in which they formed is the same as that of the parent material in which an immature soil formed.

On some of the steeper slopes in the county, erosion removes surface soil material as the soil forms. The soils on these slopes are immature even though the slopes have been exposed to weathering for thousands of years. Sylvan soils are examples.

The soils on flood plains accumulate new material during periods of flooding. This repeated deposition retards soil formation. As a result, the soils have only very weakly expressed horizons. Belknap soils are examples.

Variations in the kind of parent material can cause differences between soils that have been exposed to weathering for the same amount of time. For example, Markland soils, which formed in thin loess over clayey lacustrine deposits, have less distinct horizons and are shallower to carbonates than Alford soils, which formed in loess. These differences are caused by a slower rate of water percolation through the clayey Markland soils.

Climate

White County has a temperate, humid, continental climate. Because it is essentially uniform throughout the county, climate has not caused any obvious differences among the soils within the county. It has differentiated those soils from the soils in other regions.

Climate affects soil formation through its effect on weathering, plant and animal life, and erosion. Temperature and precipitation affect the physical and chemical nature of the soil. The rate at which minerals in the soil weather increases as the temperature increases. As water from precipitation moves through the soil, soluble salts are dissolved and transported downward. The water also transports clay-sized particles downward in the soil. A clay-enriched subsoil is the result of this translocation of clay. Precipitation can affect soil formation by removing soil at the surface. As the rate of erosion approaches the rate of soil formation, the soil generally exhibits less profile development.

Climate also affects soil formation indirectly through its effect on the vegetation on the soil. The temperature and precipitation in the county favor the growth of both forest and prairie vegetation.

Processes of Soil Formation

Soil forms through the complex interaction of four general processes (Simonson, 1959). These processes are additions, transformations, removals, and transfers. The degree of interaction of each of these processes in soil formation varies, resulting in the variety of soils on the landscape.

Additions to the soil can occur directly through the deposition of sediment on the soil surface from flooding or through the accumulation of windblown sediment. The accumulation and incorporation of organic matter in the A horizon of mineral soils also is an addition. The most striking example of this addition is the formation of the mollic epipedon. The mollic epipedon forms in an environment that features optimum moisture, temperature, and amount of bivalent cations. Such an environment allows grasses to thrive. The grassland vegetation produces large amounts of organic material. Microbial decomposition of subsurface organic residues and organic residues from the surface taken underground by soil fauna results in the most recognizable property of the mollic epipedon, which is its dark color. Armiesburg soils are examples of soils that have a mollic epipedon.

Transformations are changes that take place in the soil through the interaction of biological, chemical, and physical processes. An example is the reduction of iron and manganese oxides, which occurs in soils saturated with water. Typically, iron oxides coat soil particles and produce brownish, yellowish, or reddish colors, and manganese oxides produce black colors. When a soil becomes saturated with water and the dissolved oxygen is removed, anaerobic conditions develop. These conditions result in changes in the biogeochemical processes occurring in the soils and in the development of distinctive soil morphological characteristics (redoximorphic features). Reduced iron and manganese can move with the soil water to other parts of the soil or can be removed entirely from the soil by leaching. After the iron and manganese are gone, the leached area, or area of depletion, generally has a grayish or whitish color. If the reduced iron comes in contact with oxygen, it can re-oxidize. The result

is the formation of bright-colored concentrations or accumulations. Repeated cycles of saturation and drying create a mottled soil. Part of the soil is gray because of the loss of iron, and other parts are brown because the iron oxide has accumulated or has not been removed. The somewhat poorly drained Stoy soils are examples of soils in which this process has occurred. If a soil remains saturated for long periods, iron may be leached from the profile. Such soils are generally grayish, or gleyed. The poorly drained Ruark soils are examples.

Removals from the soil can occur as solid mineral and organic particles are lost from the soil surface as a result of either wind or water. This process is called soil erosion. Such losses can be serious because the material lost is typically the most productive part of the soil profile. The strongly sloping Ava and Alford soils are examples of soils that are highly susceptible to removals by soil erosion.

Removals can also occur within the soil, commonly as a result of leaching. The leaching of calcium carbonate from calcareous loess is an example of a removal. The loess was initially high in calcium carbonate. Water percolating through the loess dissolved and transported the calcium carbonate deeper into the soil profile. Calcium carbonate is relatively soluble and is removed early in the formation of the soil. It is also a powerful flocculent that creates microscopic soil particles too large to be transported in suspension in the soil water. Removal of calcium carbonate facilitates the dispersion of clay particles. Translocation of the dispersed clay particles can then occur in percolating soil water. Bluford soils are examples of soils in which significant removals from leaching have occurred.

Translocations are movements from one place to another in the soil. An example is the formation of an illuvial horizon through the translocation of clay from the A or E horizon, the zone of eluviation, or loss, to the B horizon, the zone of illuviation, or gain. In Ava and Bluford soils, for example, a significant amount of clay has accumulated in the form of an illuvial horizon called an argillic horizon. Argillic horizons tend to develop on stable landscapes. Fine clay was transferred from the A or E horizon by water from rain and melting snow downward through the soil to the B horizon, where it was deposited on the faces of peds and along pores.

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Fehrenbacher, J.B., J.L. White, H.P. Ulrich, and R.T. Odell. 1965. Loess distribution in southeastern Illinois and southwestern Indiana. Soil Science Society of America Proceedings 29: 566-572.

Frye, John C., A.B. Leonard, H.B. Willman, and H.D. Glass. 1972. Geology and paleontology of Late Pleistocene Lake Saline, southeastern Illinois. Illinois State Geological Survey Circular 471.

Hansel, A.K., and W.H. Johnson. 1996. Wedron and Mason Groups: Lithostratigraphic reclassification of deposits of the Wisconsin Episode, Lake Michigan lobe area. Illinois State Geological Survey Bulletin 104.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Martin, W.S., B.J. Houghtby, C. Latowski, and R. Rhynas. 1996. Soil survey of White County, Illinois. University of Illinois, Agricultural Experiment Station Soil Report 152.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Olson, K.R., and J.M. Lang. 2000. Optimum crop productivity ratings for Illinois soils. University of Illinois, College of Agricultural, Consumer and Environmental Sciences. Bulletin 811.

Olson, K.R., J.M. Lang, J.D. Garcia-Paredes, R.N. Majchrzak, C.I. Hadley, M.E. Woolery, and R.M. Rejesus. 2000. Average crop, pasture, and forestry productivity ratings for Illinois soils. University of Illinois, College of Agricultural, Consumer and Environmental Sciences. Bulletin 810.

Schmidt, T.L., M.H. Hansen, and J.A. Solomakos. 2000. Illinois' forests in 1998. U.S. Department of Agriculture, Forest Service, North Central Research Station Resource Bulletin NC-198.

Simonson, R.W. 1959. Outline of a generalized theory of soil genesis. Soil Science Society of America Proceedings 23: 152-156.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://soils.usda.gov/technical/

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2003. Keys to soil taxonomy. 9th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture. 1961. Land capability classification. Soil Conservation Service. U.S. Department of Agriculture Handbook 210.

United States Department of Agriculture, Forest Service. 1995. Ecological units of the United States. First Approximation.

United States Department of Agriculture, National Agricultural Statistics Service. 2002. The census of agriculture. http://www.agcensus.usda.gov/Publications/2002/County_Profiles/Illinois/index.asp

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://soils.usda.gov/technical/

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://soils.usda.gov/technical/

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://soils.usda.gov/

United States Department of Commerce, Bureau of the Census. 2002. State and county quickfacts. http://quickfacts.census.gov/qfd/

White County, Illinois (Web site). History. http://www.whitecounty-il.gov/

Glossary

Many of the terms relating to landforms, geology, and geomorphology are defined in more detail in the “National Soil Survey Handbook” (available in local offices of the Natural Resources Conservation Service or on the Internet).

ABC soil. A soil having an A, a B, and a C horizon.

Ablation till. Loose, relatively permeable earthy material deposited during the downwasting of nearly static glacial ice, either contained within or accumulated on the surface of the glacier.

AC soil. A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

Accretion gley. A term used to describe a soil parent material that was deposited by water in shallow depressions and developed under conditions that resulted in a gleyed (gray) color.

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alluvial fan. A low, outspread mass of loose materials and/or rock material, commonly with gentle slopes. It is shaped like an open fan or a segment of a cone. The material was deposited by a stream at the place where it issues from a narrow mountain valley or upland valley or where a tributary stream is near or at its junction with the main stream. The fan is steepest near its apex, which points upstream, and slopes gently and convexly outward (downstream) with a gradual decrease in gradient.

Alluvium. Unconsolidated material, such as gravel, sand, silt, clay, and various mixtures of these, deposited on land by running water.

Alpha,alpha-dipyridyl. A compound that when dissolved in ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction implies reducing conditions and the likely presence of redoximorphic features.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Aspect. The direction toward which a slope faces. Also called slope aspect.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

Backslope. The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Backswamp. A flood-plain landform. Extensive, marshy or swampy, depressed areas of flood plains between natural levees and valley sides or terraces.

Basal area. The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.

Basal till. Compact till deposited beneath the ice.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Base slope (geomorphology). A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).

Bedding plane. A planar or nearly planar bedding surface that visibly separates each successive layer of stratified sediment or rock (of the same or different lithology) from the preceding or following layer; a plane of deposition. It commonly marks a change in the circumstances of deposition and may show a parting, a color difference, a change in particle size, or various combinations of these. The term is commonly applied to any bedding surface, even one that is conspicuously bent or deformed by folding.

Bedding system. A drainage system made by plowing, grading, or otherwise shaping the surface of a flat field. It consists of a series of low ridges separated by shallow, parallel dead furrows.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bedrock-controlled topography. A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.

Bench terrace. A raised, level or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.

Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Blowout. A shallow depression from which all or most of the soil material has been removed by the wind. A blowout has a flat or irregular floor formed by a resistant layer or by an accumulation of pebbles or cobbles. In some blowouts the water table is exposed.

Bottom land. An informal term loosely applied to various portions of a flood plain.

Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.

Breaks. A landscape or tract of steep, rough or broken land dissected by ravines and gullies and marking a sudden change in topography.

Breast height. An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.

Brush management. Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

Calcareous soil. A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

Calcium carbonate. A common mineral in sediments and soils.

Canopy. The leafy crown of trees or shrubs. (See Crown.)

Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena. A sequence, or “chain,” of soils on a landscape that formed in similar kinds of parent material and under similar climatic conditions but that have different characteristics as a result of differences in relief and drainage.

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Catsteps. See Terracettes.

Channery soil material. Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.

Chemical treatment. Control of unwanted vegetation through the use of chemicals.

Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions. See Redoximorphic features.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Claypan. A dense, compact, slowly permeable subsoil layer that contains much more clay than the overlying materials, from which it is separated by a sharply defined boundary. A claypan is commonly hard when dry and plastic and sticky when wet.

Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Coarse textured soil. Sand or loamy sand.

Cobble (or cobblestone). A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material. Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

COLE (coefficient of linear extensibility). See Linear extensibility.

Colluvium. Unconsolidated, unsorted earth material being transported or deposited on side slopes and/or at the base of slopes by mass movement (e.g., direct gravitational action) and by local, unconcentrated runoff.

Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Concretions. See Redoximorphic features.

Congeliturbate. Soil material disturbed by frost action.

Conglomerate. A coarse grained, clastic sedimentary rock composed of rounded or subangular rock fragments more than 2 millimeters in diameter. It commonly has a matrix of sand and finer textured material. Conglomerate is the consolidated equivalent of gravel.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the “Soil Survey Manual.”

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Coprogenous earth (sedimentary peat). A type of limnic layer composed predominantly of fecal material derived from aquatic animals.

Corrosion (geomorphology). A process of erosion whereby rocks and soil are removed or worn away by natural chemical processes, especially by the solvent action of running water, but also by other reactions, such as hydrolysis, hydration, carbonation, and oxidation.

Corrosion (soil survey interpretations). Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Crop residue management. Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

Cropping system. Growing crops according to a planned system of rotation and management practices.

Cross-slope farming. Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

Crown. The upper part of a tree or shrub, including the living branches and their foliage.

Culmination of the mean annual increment (CMAI). The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Decreasers. The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Dense layer (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

Depth, soil. Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

Diamicton. A generic term for a till-like mixture of unsorted, unstratified rock debris composed of a wide range of particle sizes. Use of this term carries no suggestion about how such debris was formed or deposited.

Diatomaceous earth. A geologic deposit of fine, grayish siliceous material composed chiefly or entirely of the remains of diatoms.

Dip slope. A slope of the land surface, roughly determined by and approximately conforming to the dip of the underlying bedrock.

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Divided-slope farming. A form of field stripcropping in which crops are grown in a systematic arrangement of two strips, or bands, across the slope to reduce the hazard of water erosion. One strip is in a close-growing crop that provides protection from erosion, and the other strip is in a crop that provides less protection from erosion. This practice is used where slopes are not long enough to permit a full stripcropping pattern to be used.

Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained,* and *very poorly drained*. These classes are defined in the “Soil Survey Manual.”

Drainage, surface. Runoff, or surface flow of water, from an area.

Drainageway. A general term for a course or channel along which water moves in draining an area. A term restricted to relatively small, linear depressions that at some time move concentrated water and either do not have a defined channel or have only a small defined channel.

Drift. A general term applied to all mineral material (clay, silt, sand, gravel, and boulders) transported by a glacier and deposited directly by or from the ice or transported by running water emanating from a glacier. Drift includes unstratified material (till) that forms moraines and stratified deposits that form outwash plains, eskers, kames, varves, and glaciofluvial sediments. The term is generally applied to Pleistocene glacial deposits in areas that no longer contain glaciers.

Drumlin. A low, smooth, elongated oval hill, mound, or ridge of compact till that has a core of bedrock or drift. It commonly has a blunt nose facing the direction from which the ice approached and a gentler slope tapering in the other direction. The longer axis is parallel to the general direction of glacier flow. Drumlins are products of streamline (laminar) flow of glaciers, which molded the subglacial floor through a combination of erosion and deposition.

Duff. A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.

Dune. A low mound, ridge, bank, or hill of loose, windblown granular material (generally sand), either barren and capable of movement from place to place or covered and stabilized with vegetation but retaining its characteristic shape.

Earthy fill. See Mine spoil.

Ecological site. An area where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other ecological sites in kind and/or proportion of species or in total production.

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

End moraine. A ridgelike accumulation that is being or was produced at the outer margin of an actively flowing glacier at any given time.

Endosaturation. A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

Eolian deposit. Sand-, silt-, or clay-sized clastic material transported and deposited primarily by wind, commonly in the form of a dune or a sheet of sand or loess.

Ephemeral stream. A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

Episaturation. A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Erosion surface. A land surface shaped by the action of erosion, especially by running water.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Most commonly applied to cliffs produced by differential erosion. Synonym: scarp.

Esker. A long, narrow, sinuous, steep-sided ridge of stratified sand and gravel deposited as the bed of a stream flowing in an ice tunnel within or below the ice (subglacial) or between ice walls on top of the ice of a wasting glacier and left behind as high ground when the ice melted. Eskers range in length from less than a kilometer to more than 160 kilometers and in height from 3 to 30 meters.

Extrusive rock. Igneous rock derived from deep-seated molten matter (magma) deposited and cooled on the earth’s surface.

Fallow. Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Fibric soil material (peat). The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity*.

Fill slope. A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

Fine textured soil. Sandy clay, silty clay, or clay.

Firebreak. An area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.

First bottom. An obsolete, informal term loosely applied to the lowest flood-plain steps that are subject to regular flooding.

Flaggy soil material. Material that has, by volume, 15 to 35 percent flagstones. Very flaggy soil material has 35 to 60 percent flagstones, and extremely flaggy soil material has more than 60 percent flagstones.

Flagstone. A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.

Flood plain. The nearly level plain that borders a stream and is subject to flooding unless protected artificially.

Flood-plain landforms. A variety of constructional and erosional features produced by stream channel migration and flooding. Examples include backswamps, flood-plain splays, meanders, meander belts, meander scrolls, oxbow lakes, and natural levees.

Flood-plain splay. A fan-shaped deposit or other outspread deposit formed where an overloaded stream breaks through a levee (natural or artificial) and deposits its material (commonly coarse grained) on the flood plain.

Flood-plain step. An essentially flat, terrace-like alluvial surface within a valley that is frequently covered by floodwater from the present stream; any approximately horizontal surface still actively modified by fluvial scour and/or deposition. May occur individually or as a series of steps.

Fluvial. Of or pertaining to rivers or streams; produced by stream or river action.

Footslope. The concave surface at the base of a hillslope. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

Forb. Any herbaceous plant not a grass or a sedge.

Forest cover. All trees and other woody plants (underbrush) covering the ground in a forest.

Forest type. A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

Fragipan. A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Geosol. A buried soil that formed on a landscape in the past with distinctive morphological features resulting from a soil-forming environment that no longer exists at the site. The former pedogenic process was interrupted by burial. A geosol is a laterally traceable, mappable, geologic weathering profile that has a consistent stratigraphic position. (See Paleosol.)

Glacial (geology). This term embraces both the processes and results of erosion and deposition arising from the presence of an ice mass (glacier) on a landscape.

Glacial lake (relict). An area formerly occupied by a glacial lake. (See Glaciolacustrine deposits.)

Glaciofluvial deposits. Material moved by glaciers and subsequently sorted and deposited by streams flowing from the melting ice. The deposits are stratified and occur in the form of outwash plains, valley trains, deltas, kames, eskers, and kame terraces.

Glaciolacustrine deposits. Material ranging from fine clay to sand derived from glaciers and deposited in glacial lakes mainly by glacial meltwater. Many deposits are bedded or laminated.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping. Growing crops in strips that grade toward a protected waterway.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground moraine. An extensive, fairly even layer of till having an uneven or undulating surface.

Ground water. Water filling all the unblocked pores of the material below the water table.

Gully. A small channel with steep sides caused by erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hard to reclaim (in tables). Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Hardpan. A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

Head slope (geomorphology). A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

Hemic soil material (mucky peat). Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

High-residue crops. Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

Hill. A generic term for an elevated area of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline. Slopes are generally more than 15 percent. The distinction between a hill and a mountain is arbitrary and may depend on local usage.

Hillslope. A generic term for the steeper part of a hill between its summit and the drainage line, valley flat, or depression floor at the base of a hill.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the “Soil Survey Manual.” The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue.

L horizon.—A layer of organic and mineral limnic materials, including coprogenous earth (sedimentary peat), diatomaceous earth, and marl.

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

Humus. The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Igneous rock. Rock that was formed by cooling and solidification of magma and that has not been changed appreciably by weathering since its formation. Major varieties include plutonic and volcanic rock (e.g., andesite, basalt, and granite).

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Increasers. Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Interfluve. A landform composed of the relatively undissected upland or ridge between two adjacent valleys containing streams flowing in the same general direction. An elevated area between two drainageways that sheds water to those drainageways.

Interfluve (geomorphology). A geomorphic component of hills consisting of the uppermost, comparatively level or gently sloping area of a hill; shoulders of backwearing hillslopes can narrow the upland or can merge, resulting in a strongly convex shape.

Intermittent stream. A stream, or reach of a stream, that does not flow year-round but that is commonly dry for 3 or more months out of 12 and whose channel is generally below the local water table. It flows only during wet periods or when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Invaders. On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

Iron depletions. See Redoximorphic features.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation include:

Controlled flooding.—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Drip (or trickle).—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Kame. A low mound, knob, hummock, or short irregular ridge composed of stratified sand and gravel deposited by a subglacial stream as a fan or delta at the margin of a melting glacier; by a supraglacial stream in a low place or hole on the surface of the glacier; or as a ponded deposit on the surface or at the margin of stagnant ice.

Karst (topography). A kind of topography that formed in limestone, gypsum, or other soluble rocks by dissolution and that is characterized by closed depressions, sinkholes, caves, and underground drainage.

Knoll. A small, low, rounded hill rising above adjacent landforms.

Ksat. Saturated hydraulic conductivity. (See Permeability.)

Lacustrine deposit. Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

Lake plain. A nearly level surface marking the floor of an extinct lake filled by well sorted, generally fine textured, stratified deposits, commonly containing varves.

Lake terrace. A narrow shelf, partly cut and partly built, produced along a lakeshore in front of a scarp line of low cliffs and later exposed when the water level falls.

Landslide. A general, encompassing term for most types of mass movement landforms and processes involving the downslope transport and outward deposition of soil and rock materials caused by gravitational forces; the movement may or may not involve saturated materials. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Leaching. The removal of soluble material from soil or other material by percolating water.

Linear extensibility. Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at $^{1}/_{3}$- or $^{1}/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Loess. Material transported and deposited by wind and consisting dominantly of silt-sized particles.

Low strength. The soil is not strong enough to support loads.

Low-residue crops. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Marl. An earthy, unconsolidated deposit consisting chiefly of calcium carbonate mixed with clay in approximately equal proportions; formed primarily under freshwater lacustrine conditions but also formed in more saline environments.

Mass movement. A generic term for the dislodgment and downslope transport of soil and rock material as a unit under direct gravitational stress.

Masses. See Redoximorphic features.

Meander belt. The zone within which migration of a meandering channel occurs; the flood-plain area included between two imaginary lines drawn tangential to the outer bends of active channel loops.

Meander scar. A crescent-shaped, concave or linear mark on the face of a bluff or valley wall, produced by the lateral erosion of a meandering stream that impinged upon and undercut the bluff.

Meander scroll. One of a series of long, parallel, close-fitting, crescent-shaped ridges and troughs formed along the inner bank of a stream meander as the channel migrated laterally down-valley and toward the outer bank.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Metamorphic rock. Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement at depth in the earth's crust. Nearly all such rocks are crystalline.

Mine spoil. An accumulation of displaced earthy material, rock, or other waste material removed during mining or excavation. Also called earthy fill.

Mineral soil. Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area. A kind of map unit that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Mollic epipedon. A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

Moraine. In terms of glacial geology, a mound, ridge, or other topographically distinct accumulation of unsorted, unstratified drift, predominantly till, deposited primarily by the direct action of glacial ice in a variety of landforms. Also, a general term for a landform composed mainly of till (except for kame moraines, which are composed mainly of stratified outwash) that has been deposited by a glacier. Some types of moraines are disintegration, end, ground, kame, lateral, recessional, and terminal.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil. Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium,* from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse,* more than 15 millimeters (about 0.6 inch).

Muck. Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

Munsell notation. A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Natric horizon. A special kind of argillic horizon that contains enough exchangeable sodium to have an adverse effect on the physical condition of the subsoil.

Neutral soil. A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nodules. See Redoximorphic features.

Nose slope (geomorphology). A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent. Nose slopes consist dominantly of colluvium and slope-wash sediments (for example, slope alluvium).

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter. Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low	less than 0.5 percent
Low	0.5 to 1.0 percent
Moderately low	1.0 to 2.0 percent
Moderate	2.0 to 4.0 percent
High	4.0 to 8.0 percent
Very high	more than 8.0 percent

Outwash. Stratified and sorted sediments (chiefly sand and gravel) removed or "washed out" from a glacier by meltwater streams and deposited in front of or beyond the end moraine or the margin of a glacier. The coarser material is deposited nearer to the ice.

Outwash plain. An extensive lowland area of coarse textured glaciofluvial material. An outwash plain is commonly smooth; where pitted, it generally is low in relief.

Paleosol. A general term used to describe a soil that formed on a landscape of the past; it may be a buried soil, a relict soil, or an exhumed soil. (See Geosol.)

Paleoterrace. An erosional remnant of a terrace that retains the surface form and alluvial deposits of its origin but was not emplaced by, and commonly does not grade to, a present-day stream or drainage network.

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan*.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Peat. Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedisediment. A layer of sediment, eroded from the shoulder and backslope of an erosional slope, that lies on and is being (or was) transported across a gently sloping erosional surface at the foot of a receding hill or mountain slope.

Pedon. The smallest volume that can be called "a soil." A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The movement of water through the soil.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as "saturated hydraulic conductivity," which is defined in the "Soil Survey Manual." In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as "permeability." Terms describing permeability, measured in inches per hour, are as follows:

Impermeable	less than 0.0015 inch
Very slow	0.0015 to 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Pitting (in tables). Pits caused by melting around ice. They form on the soil after plant cover is removed.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plateau (geomorphology). A comparatively flat area of great extent and elevation; specifically, an extensive land region that is considerably elevated (more than 100 meters) above the adjacent lower lying terrain, is commonly limited on at least one side by an abrupt descent, and has a flat or nearly level surface. A comparatively large part of a plateau surface is near summit level.

Plowpan. A compacted layer formed in the soil directly below the plowed layer.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Pore linings. See Redoximorphic features.

Potential native plant community. See Climax plant community.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed as pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Red beds. Sedimentary strata that are mainly red and are made up largely of sandstone and shale.

Redoximorphic concentrations. See Redoximorphic features.

Redoximorphic depletions. See Redoximorphic features.

Redoximorphic features. Redoximorphic features are associated with wetness and result from alternating periods of reduction and oxidation of iron and manganese compounds in the soil. Reduction occurs during saturation with water, and oxidation occurs when the soil is not saturated. Characteristic color

patterns are created by these processes. The reduced iron and manganese ions may be removed from a soil if vertical or lateral fluxes of water occur, in which case there is no iron or manganese precipitation in that soil. Wherever the iron and manganese are oxidized and precipitated, they form either soft masses or hard concretions or nodules. Movement of iron and manganese as a result of redoximorphic processes in a soil may result in redoximorphic features that are defined as follows:

1. Redoximorphic concentrations.—These are zones of apparent accumulation of iron-manganese oxides, including:
   - A. Nodules and concretions, which are cemented bodies that can be removed from the soil intact. Concretions are distinguished from nodules on the basis of internal organization. A concretion typically has concentric layers that are visible to the naked eye. Nodules do not have visible organized internal structure; *and*
   - B. Masses, which are noncemented concentrations of substances within the soil matrix; *and*
   - C. Pore linings, i.e., zones of accumulation along pores that may be either coatings on pore surfaces or impregnations from the matrix adjacent to the pores.
2. Redoximorphic depletions.—These are zones of low chroma (chromas less than those in the matrix) where either iron-manganese oxides alone or both iron-manganese oxides and clay have been stripped out, including:
   - A. Iron depletions, i.e., zones that contain low amounts of iron and manganese oxides but have a clay content similar to that of the adjacent matrix; *and*
   - B. Clay depletions, i.e., zones that contain low amounts of iron, manganese, and clay (often referred to as silt coatings or skeletans).
3. Reduced matrix.—This is a soil matrix that has low chroma *in situ* but undergoes a change in hue or chroma within 30 minutes after the soil material has been exposed to air.

Reduced matrix. See Redoximorphic features.

Regolith. All unconsolidated earth materials above the solid bedrock. It includes material weathered in place from all kinds of bedrock and alluvial, glacial, eolian, lacustrine, and pyroclastic deposits.

Relief. The relative difference in elevation between the upland summits and the lowlands or valleys of a given region.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as bedrock disintegrated in place.

Rill. A very small, steep-sided channel resulting from erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. A rill generally is not an obstacle to wheeled vehicles and is shallow enough to be smoothed over by ordinary tillage.

Riser. The vertical or steep side slope (e.g., escarpment) of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural, steplike landforms, such as successive stream terraces.

Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Root zone. The part of the soil that can be penetrated by plant roots.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface

runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Saline soil. A soil containing soluble salts in an amount that impairs growth of plants. A saline soil does not contain excess exchangeable sodium.

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Sapric soil material (muck). The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

Saturated hydraulic conductivity (Ksat). See Permeability.

Saturation. Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Scarification. The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.

Sedimentary rock. A consolidated deposit of clastic particles, chemical precipitates, or organic remains accumulated at or near the surface of the earth under normal low temperature and pressure conditions. Sedimentary rocks include consolidated equivalents of alluvium, colluvium, drift, and eolian, lacustrine, and marine deposits. Examples are sandstone, siltstone, mudstone, claystone, shale, conglomerate, limestone, dolomite, and coal.

Sequum. A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

Series, soil. A group of soils that have profiles that are almost alike. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Shale. Sedimentary rock that formed by the hardening of a deposit of clay, silty clay, or silty clay loam and that has a tendency to split into thin layers.

Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Shoulder. The convex, erosional surface near the top of a hillslope. A shoulder is a transition from summit to backslope.

Shrink-swell (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Side slope (geomorphology). A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel. Side slopes are dominantly colluvium and slope-wash sediments.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

Silica-sesquioxide ratio. The ratio of the number of molecules of silica to the number of molecules of alumina and iron oxide. The more highly weathered soils or their clay fractions in warm-temperate, humid regions, and especially those in the tropics, generally have a low ratio.

Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Siltstone. An indurated silt having the texture and composition of shale but lacking its fine lamination or fissility; a massive mudstone in which silt predominates over clay.

Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Sinkhole. A closed, circular or elliptical depression, commonly funnel shaped, characterized by subsurface drainage and formed either by dissolution of the surface of underlying bedrock (e.g., limestone, gypsum, or salt) or by collapse of underlying caves within bedrock. Complexes of sinkholes in carbonate-rock terrain are the main components of karst topography.

Site index. A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

Slickensides (pedogenic). Grooved, striated, and/or glossy (shiny) slip faces on structural peds, such as wedges; produced by shrink-swell processes, most commonly in soils that have a high content of expansive clays.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance.

Slope alluvium. Sediment gradually transported down the slopes of mountains or hills primarily by nonchannel alluvial processes (i.e., slope-wash processes) and characterized by particle sorting. Lateral particle sorting is evident on long slopes. In a profile sequence, sediments may be distinguished by differences in size and/or specific gravity of rock fragments and may be separated by stone lines. Burnished peds and sorting of rounded or subrounded pebbles or cobbles distinguish these materials from unsorted colluvial deposits.

Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

Sodium adsorption ratio (SAR). A measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration.

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth’s surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief and by the passage of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Stone line. In a vertical cross section, a line formed by scattered fragments or a discrete layer of angular and subangular rock fragments (commonly a gravel- or cobble-sized lag concentration) that formerly was draped across a topographic surface and was later buried by additional sediments. A stone line generally caps material that was subject to weathering, soil formation, and erosion before burial.

Many stone lines seem to be buried erosion pavements, originally formed by sheet and rill erosion across the land surface.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Strath terrace. A type of stream terrace; formed as an erosional surface cut on bedrock and thinly mantled with stream deposits (alluvium).

Stream terrace. One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel, originally formed near the level of the stream; represents the remnants of an abandoned flood plain, stream bed, or valley floor produced during a former state of fluvial erosion or deposition.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grain* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum. The part of the soil below the solum.

Subsurface layer. Any surface soil horizon (A, E, AB, or EB) below the surface layer.

Summer fallow. The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop. A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.

Summit. The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer,” or the “Ap horizon.”

Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Talf. A geomorphic component of flat plains consisting of an essentially flat and broad area dominated by closed depressions and a nonintegrated or poorly integrated drainage system. Precipitation tends to pond locally, and lateral transport is slow both above and below ground. These conditions favor the accumulation of soil organic matter and a retention of fine earth sediments; better drained soils are commonly adjacent to drainageways.

Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.

Terminal moraine. An end moraine that marks the farthest advance of a glacier. It typically has the form of a massive arcuate or concentric ridge, or complex of ridges, and is underlain by till and other types of drift.

Terrace (conservation). An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geomorphology). A steplike surface, bordering a valley floor or shoreline, that represents the former position of a flood plain, lake, or seashore. The term is usually applied both to the relatively flat summit surface (tread) that was cut or built by stream or wave action and to the steeper descending slope (scarp or riser) that has graded to a lower base level of erosion.

Terracettes. Small, irregular steplike forms on steep hillslopes, especially in pasture, formed by creep or erosion of surficial materials that may be induced or enhanced by trampling of livestock, such as sheep or cattle.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying “coarse,” “fine,” or “very fine.”

Thin layer (in tables). Otherwise suitable soil material that is too thin for the specified use.

Till. Dominantly unsorted and nonstratified drift, generally unconsolidated and deposited directly by a glacier without subsequent reworking by meltwater, and consisting of a heterogeneous mixture of clay, silt, sand, gravel, stones, and boulders; rock fragments of various lithologies are embedded within a finer matrix that can range from clay to sandy loam.

Till plain. An extensive area of level to gently undulating soils underlain predominantly by till and bounded at the distal end by subordinate recessional or end moraines.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toeslope. The gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Tread. The flat to gently sloping, topmost, laterally extensive slope of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural steplike landforms, such as successive stream terraces.

Upland. An informal, general term for the higher ground of a region, in contrast with a low-lying adjacent area, such as a valley or plain, or for land at a higher elevation than the flood plain or low stream terrace; land above the footslope zone of the hillslope continuum.

Valley fill. The unconsolidated sediment deposited by any agent (water, wind, ice, or mass wasting) so as to fill or partly fill a valley.

Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Varve. A sedimentary layer or a lamina or sequence of laminae deposited in a body of still water within a year. Specifically, a thin pair of graded glaciolacustrine layers

seasonally deposited, usually by meltwater streams, in a glacial lake or other body of still water in front of a glacier.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Weathering. All physical disintegration, chemical decomposition, and biologically induced changes in rocks or other deposits at or near the earth's surface by atmospheric or biologic agents or by circulating surface waters but involving essentially no transport of the altered material.

Well graded. Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wilting point (or permanent wilting point). The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Windthrow. The uprooting and tipping over of trees by the wind.

Tables

Table 1.--Temperature and Precipitation

(Recorded in the period 1971-2000 at Albion, Illinois)

Month	Temperature						Precipitation				
	Average daily maximum	Average daily minimum	Average	2 years in 10 will have-- Maximum temperature higher than--	2 years in 10 will have-- Minimum temperature lower than--	Average number of growing degree days*	Average	2 years in 10 will have-- Less than--	2 years in 10 will have-- More than--	Average number of days with 0.10 inch or more	Average snowfall
	°F	°F	°F	°F	°F	Units	In	In	In		In
January----	38.8	22.6	30.7	66	-8	6	2.48	0.88	3.93	4	3.3
February---	45.0	26.6	35.8	72	-3	15	2.80	1.34	4.07	4	2.4
March------	56.1	36.0	46.1	81	11	87	4.23	2.30	6.20	6	1.6
April------	67.4	45.3	56.3	86	25	231	5.11	2.61	7.02	7	.1
May--------	76.9	55.5	66.2	92	37	496	4.63	2.55	6.43	7	.0
June-------	86.0	64.5	75.2	98	47	747	4.09	1.97	6.23	6	.0
July-------	90.0	68.2	79.1	100	54	884	3.55	1.91	4.95	5	.0
August-----	88.2	66.2	77.2	100	53	831	3.42	1.43	5.07	5	.0
September--	81.5	58.8	70.1	97	40	600	2.84	1.13	4.32	4	.0
October----	70.6	47.3	58.9	89	28	291	3.32	1.88	4.60	5	.1
November---	55.4	37.2	46.3	77	15	82	4.24	2.00	6.43	6	.3
December---	43.2	26.8	35.0	67	-2	13	3.54	1.61	5.18	6	3.0
Yearly:											
Average---	66.6	46.2	56.4	---	---	---	---	---	---	---	---
Extreme---	105	-20	---	101	-11	---	---	---	---	---	---
Total-----	---	---	---	---	---	4,283	44.25	35.39	51.71	65	10.9

* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (50 degrees F).

Table 2.--Freeze Dates in Spring and Fall

(Recorded in the period 1971-2000 at Albion, Illinois)

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
Last freezing temperature in spring:			
1 year in 10 later than--	Apr. 4	Apr. 14	Apr. 21
2 years in 10 later than--	Mar. 30	Apr. 9	Apr. 16
5 years in 10 later than--	Mar. 19	Mar. 30	Apr. 8
First freezing temperature in fall:			
1 year in 10 earlier than--	Nov. 2	Oct. 21	Oct. 10
2 years in 10 earlier than--	Nov. 7	Oct. 26	Oct. 16
5 years in 10 earlier than--	Nov. 18	Nov. 6	Oct. 27

Table 3.--Growing Season

(Recorded in the period 1971-2000 at Albion, Illinois)

Probability	Daily minimum temperature during growing season		
	Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	Days	Days	Days
9 years in 10	221	197	180
8 years in 10	229	205	188
5 years in 10	244	221	202
2 years in 10	259	236	216
1 year in 10	267	244	223

Table 4.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
2A	Cisne silt loam, 0 to 2 percent slopes	774	0.2
3A	Hoyleton silt loam, 0 to 2 percent slopes	368	0.1
3B	Hoyleton silt loam, 2 to 5 percent slopes	1,934	0.6
8D2	Hickory silt loam, 10 to 18 percent slopes, eroded	2,048	0.6
8F	Hickory silt loam, 18 to 35 percent slopes	2,116	0.7
12A	Wynoose silt loam, 0 to 2 percent slopes	830	0.3
13A	Bluford silt loam, 0 to 2 percent slopes	5,152	1.6
13B	Bluford silt loam, 2 to 5 percent slopes	5,041	1.6
13B2	Bluford silt loam, 2 to 5 percent slopes, eroded	1,380	0.4
14B	Ava silt loam, 2 to 5 percent slopes	13,338	4.2
14B2	Ava silt loam, 2 to 5 percent slopes, eroded	7,239	2.3
14C2	Ava silt loam, 5 to 10 percent slopes, eroded	12,142	3.8
14C3	Ava silty clay loam, 5 to 10 percent slopes, severely eroded	7,872	2.4
15B	Parke silt loam, 2 to 5 percent slopes	201	*
15C2	Parke silt loam, 5 to 10 percent slopes, eroded	719	0.2
15D2	Parke silt loam, 10 to 18 percent slopes, eroded	254	*
19F	Sylvan silt loam, 18 to 35 percent slopes	695	0.2
53B	Bloomfield fine sand, 1 to 5 percent slopes	1,674	0.5
53C	Bloomfield fine sand, 5 to 10 percent slopes	1,129	0.4
53D	Bloomfield fine sand, 10 to 18 percent slopes	394	0.1
75B	Drury silt loam, 2 to 5 percent slopes	115	*
87A	Dickinson sandy loam, 0 to 2 percent slopes	825	0.3
87B	Dickinson sandy loam, 2 to 5 percent slopes	373	0.1
109A	Racoon silt loam, 0 to 2 percent slopes	2,509	0.8
131A	Alvin fine sandy loam, 0 to 2 percent slopes	1,128	0.4
131B	Alvin fine sandy loam, 2 to 5 percent slopes	1,837	0.6
131C	Alvin fine sandy loam, 5 to 10 percent slopes	1,176	0.4
131F	Alvin fine sandy loam, 18 to 35 percent slopes	415	0.1
142A	Patton silty clay loam, 0 to 2 percent slopes	5,417	1.7
142A+	Patton silt loam, 0 to 2 percent slopes, overwash	1,632	0.5
164A	Stoy silt loam, 0 to 2 percent slopes	1,034	0.3
164B	Stoy silt loam, 2 to 5 percent slopes	1,303	0.4
165A	Weir silt loam, 0 to 2 percent slopes	147	*
173A	McGary silt loam, 0 to 2 percent slopes	812	0.3
173B2	McGary silt loam, 2 to 5 percent slopes, eroded	227	*
176A	Marissa silt loam, 0 to 2 percent slopes	882	0.3
178A	Ruark loam, 0 to 2 percent slopes	3,819	1.2
184A	Roby fine sandy loam, 0 to 2 percent slopes	593	0.2
208A	Sexton silt loam, 0 to 2 percent slopes	563	0.2
214B	Hosmer silt loam, 2 to 5 percent slopes	4,005	1.2
214B2	Hosmer silt loam, 2 to 5 percent slopes, eroded	3,472	1.1
214C2	Hosmer silt loam, 5 to 10 percent slopes, eroded	3,573	1.1
214C3	Hosmer silt loam, 5 to 10 percent slopes, severely eroded	3,520	1.1
231A	Evansville silt loam, 0 to 2 percent slopes	90	*
301B	Grantsburg silt loam, 2 to 5 percent slopes	1,186	0.4
308B	Alford silt loam, 2 to 5 percent slopes	3,005	0.9
308B2	Alford silt loam, 2 to 5 percent slopes, eroded	1,109	0.3
308C2	Alford silt loam, 5 to 10 percent slopes, eroded	2,986	0.9
308C3	Alford silt loam, 5 to 10 percent slopes, severely eroded	2,162	0.7
308D2	Alford silt loam, 10 to 18 percent slopes, eroded	497	0.2
308D3	Alford silt loam, 10 to 18 percent slopes, severely eroded	807	0.3
337A	Creal silt loam, 0 to 2 percent slopes	4,773	1.5
339F	Wellston silt loam, 18 to 35 percent slopes	662	0.2
340C2	Zanesville silt loam, 5 to 10 percent slopes, eroded	1,785	0.6
340C3	Zanesville silty clay loam, 5 to 10 percent slopes, severely eroded	367	0.1
340D2	Zanesville silt loam, 10 to 18 percent slopes, eroded	1,904	0.6
340D3	Zanesville silty clay loam, 10 to 18 percent slopes, severely eroded	733	0.2
434A	Ridgway silt loam, 0 to 2 percent slopes	1,540	0.5
434B	Ridgway silt loam, 2 to 5 percent slopes	1,532	0.5
434C2	Ridgway silt loam, 5 to 10 percent slopes, eroded	606	0.2
436A	Meadowbank silt loam, 0 to 2 percent slopes	1,921	0.6
436B	Meadowbank silt loam, 2 to 5 percent slopes	137	*
445A	Newhaven loam, 0 to 2 percent slopes	433	0.1

See footnote at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
446A	Springerton loam, 0 to 2 percent slopes	940	0.3
453B	Muren silt loam, 2 to 5 percent slopes	942	0.3
467B2	Markland silt loam, 2 to 5 percent slopes, eroded	339	0.1
467C2	Markland silt loam, 5 to 10 percent slopes, eroded	224	*
467C3	Markland silty clay loam, 5 to 10 percent slopes, severely eroded	177	*
482B	Uniontown silt loam, 2 to 5 percent slopes	3,652	1.1
482B2	Uniontown silt loam, 2 to 5 percent slopes, eroded	2,038	0.6
482C2	Uniontown silt loam, 5 to 10 percent slopes, eroded	673	0.2
482C3	Uniontown silty clay loam, 5 to 10 percent slopes, severely eroded	986	0.3
483A	Henshaw silt loam, 0 to 2 percent slopes	7,347	2.3
484A	Harco silt loam, 0 to 2 percent slopes	346	0.1
585F	Negley loam, 18 to 35 percent slopes	124	*
630C3	Navlys silty clay loam, 5 to 10 percent slopes, severely eroded	336	0.1
630D3	Navlys silty clay loam, 10 to 18 percent slopes, severely eroded	220	*
750A	Skelton fine sandy loam, 0 to 2 percent slopes	575	0.2
750B	Skelton fine sandy loam, 2 to 5 percent slopes	900	0.3
750C2	Skelton fine sandy loam, 5 to 10 percent slopes, eroded	286	*
751A	Crawleyville fine sandy loam, 0 to 2 percent slopes	1,009	0.3
784F	Berks loam, 18 to 35 percent slopes	761	0.2
802B	Orthents, loamy, undulating	796	0.2
865	Pits, gravel	303	*
898G	Sylvan-Hickory silt loams, 35 to 70 percent slopes	1,996	0.6
908G	Kell-Hickory silt loams, 35 to 70 percent slopes	1,092	0.3
929D3	Hickory-Ava complex, 10 to 18 percent slopes, severely eroded	4,866	1.5
1288A	Petrolia silty clay loam, undrained, 0 to 2 percent slopes, frequently flooded	6,523	2.0
3092A	Sarpy sandy loam, 0 to 2 percent slopes, frequently flooded	555	0.2
3103L	Houghton muck, 0 to 2 percent slopes, frequently flooded, long duration	119	*
3108A	Bonnie silt loam, 0 to 2 percent slopes, frequently flooded	17,864	5.6
3142A	Patton silty clay loam, 0 to 2 percent slopes, frequently flooded	3,850	1.2
3178A	Ruark loam, 0 to 2 percent slopes, frequently flooded	980	0.3
3231A	Evansville silt loam, 0 to 2 percent slopes, frequently flooded	919	0.3
3302A	Ambraw clay loam, 0 to 2 percent slopes, frequently flooded	971	0.3
3304A	Landes fine sandy loam, 0 to 2 percent slopes, frequently flooded	1,963	0.6
3331A	Haymond silt loam, 0 to 3 percent slopes, frequently flooded	1,011	0.3
3333A	Wakeland silt loam, 0 to 2 percent slopes, frequently flooded	3,846	1.2
3382A	Belknap silt loam, 0 to 2 percent slopes, frequently flooded	16,715	5.2
3420A	Piopolis silty clay loam, 0 to 2 percent slopes, frequently flooded	1,628	0.5
3465A	Montgomery silty clay loam, 0 to 2 percent slopes, frequently flooded	1,690	0.5
3524A	Zipp silty clay, 0 to 2 percent slopes, frequently flooded	6,650	2.1
3597A	Armiesburg silty clay loam, 0 to 2 percent slopes, frequently flooded	6,813	2.1
3601A	Nolin silty clay loam, 0 to 2 percent slopes, frequently flooded	5,250	1.6
3602A	Newark silt loam, 0 to 2 percent slopes, frequently flooded	5,236	1.6
3665A	Stonelick loam, 0 to 2 percent slopes, frequently flooded	3,204	1.0
7087A	Dickinson sandy loam, 0 to 2 percent slopes, rarely flooded	596	0.2
7109A	Racoon silt loam, 0 to 2 percent slopes, rarely flooded	1,383	0.4
7131A	Alvin fine sandy loam, 0 to 2 percent slopes, rarely flooded	2,580	0.8
7131B	Alvin fine sandy loam, 2 to 5 percent slopes, rarely flooded	1,118	0.3
7142A	Patton silty clay loam, 0 to 2 percent slopes, rarely flooded	5,154	1.6
7142A+	Patton silt loam, 0 to 2 percent slopes, rarely flooded, overwash	47	*
7173A	McGary silt loam, 0 to 2 percent slopes, rarely flooded	4,018	1.3
7173B2	McGary silt loam, 2 to 5 percent slopes, eroded, rarely flooded	547	0.2
7176A	Marissa silt loam, 0 to 2 percent slopes, rarely flooded	1,115	0.3
7178A	Ruark loam, 0 to 2 percent slopes, rarely flooded	5,487	1.7
7184A	Roby fine sandy loam, 0 to 2 percent slopes, rarely flooded	1,082	0.3
7208A	Sexton silt loam, 0 to 2 percent slopes, rarely flooded	4,079	1.3
7434A	Ridgway silt loam, 0 to 2 percent slopes, rarely flooded	1,339	0.4
7434B	Ridgway silt loam, 2 to 5 percent slopes, rarely flooded	742	0.2
7436A	Meadowbank silt loam, 0 to 2 percent slopes, rarely flooded	712	0.2
7445A	Newhaven loam, 0 to 2 percent slopes, rarely flooded	626	0.2
7446A	Springerton loam, 0 to 2 percent slopes, rarely flooded	2,245	0.7
7462A	Sciotoville silt loam, 0 to 2 percent slopes, rarely flooded	1,844	0.6
7462B	Sciotoville silt loam, 2 to 5 percent slopes, rarely flooded	684	0.2

See footnote at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
7465A	Montgomery silty clay loam, 0 to 2 percent slopes, rarely flooded	4,038	1.3
7467B2	Markland silt loam, 2 to 5 percent slopes, eroded, rarely flooded	732	0.2
7467C2	Markland silt loam, 5 to 10 percent slopes, eroded, rarely flooded	817	0.3
7482B	Uniontown silt loam, 2 to 5 percent slopes, rarely flooded	1,045	0.3
7482C2	Uniontown silt loam, 5 to 10 percent slopes, eroded, rarely flooded	648	0.2
7483A	Henshaw silt loam, 0 to 2 percent slopes, rarely flooded	4,712	1.5
7484A	Harco silt loam, 0 to 2 percent slopes, rarely flooded	198	*
7524A	Zipp silty clay, 0 to 2 percent slopes, rarely flooded	3,767	1.2
7524A+	Zipp silt loam, 0 to 2 percent slopes, rarely flooded, overwash	503	0.2
7750A	Skelton fine sandy loam, 0 to 2 percent slopes, rarely flooded	3,522	1.1
7750B	Skelton fine sandy loam, 2 to 5 percent slopes, rarely flooded	1,673	0.5
7750C2	Skelton fine sandy loam, 5 to 10 percent slopes, eroded, rarely flooded	899	0.3
7751A	Crawleyville fine sandy loam, 0 to 2 percent slopes, rarely flooded	4,186	1.3
7787A	Banlic silt loam, 0 to 2 percent slopes, rarely flooded	504	0.2
7812E	Typic Hapludalfs, 10 to 30 percent slopes, rarely flooded	1,505	0.5
8072A	Sharon silt loam, 0 to 2 percent slopes, occasionally flooded	926	0.3
8460A	Ginat silt loam, 0 to 2 percent slopes, occasionally flooded	1,491	0.5
M-W	Miscellaneous water	46	*
W	Water	5,123	1.6
	Total	321,360	100.0

* Less than 0.1 percent.

Table 5.--Limitations and Hazards Affecting Cropland and Pastureland

(See text for a description of the limitations and hazards listed in this table. Only the soils that are generally available for use as cropland or pastureland are listed)

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pastureland
2A:		
Cisne	Wetness, low pH, crusting, restricted permeability	Wetness, restricted trafficability, low pH
3A:		
Hoyleton	Low pH, crusting, restricted permeability	Restricted trafficability, low pH
3B:		
Hoyleton	Low pH, crusting, water erosion, restricted permeability	Restricted trafficability, low pH, water erosion
8D2:		
Hickory	Equipment limitation (slope), low pH, crusting, water erosion	Equipment limitation (slope), low pH, water erosion
8F:		
Hickory	Equipment limitation (slope), low pH, crusting, water erosion	Equipment limitation (slope), low pH, water erosion
12A:		
Wynoose	Ponding, wetness, low pH, crusting, restricted permeability	Ponding, wetness, restricted trafficability, low pH
13A:		
Bluford	Wetness, low pH, crusting, restricted permeability	Restricted trafficability, low pH
13B:		
Bluford	Wetness, low pH, crusting, water erosion, restricted permeability	Restricted trafficability, low pH, water erosion
13B2:		
Bluford	Wetness, low pH, crusting, water erosion, restricted permeability	Restricted trafficability, low pH, water erosion
14B:		
Ava	Limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability	Limited rooting depth (fragipan), low pH, water erosion
14B2:		
Ava	Limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability	Limited rooting depth (fragipan), low pH, water erosion

Table 5.--Limitations and Hazards Affecting Cropland and Pastureland--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pastureland
14C2:		
Ava	Limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability	Limited rooting depth (fragipan), low pH, water erosion
14C3:		
Ava	Limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability	Limited rooting depth (fragipan), low pH, water erosion
15B:		
Parke	Low pH, crusting, water erosion	Low pH, water erosion
15C2:		
Parke	Low pH, crusting, water erosion	Low pH, water erosion
15D2:		
Parke	Equipment limitation (slope), low pH, crusting, water erosion	Equipment limitation (slope), low pH, water erosion
19F:		
Sylvan	Equipment limitation (slope), low pH, crusting, water erosion	Equipment limitation (slope), low pH, water erosion
53B:		
Bloomfield	Low pH, wind erosion, low available water capacity	Low pH, wind erosion, low available water capacity
53C:		
Bloomfield	Low pH, wind erosion, low available water capacity	Low pH, wind erosion, low available water capacity
53D:		
Bloomfield	Equipment limitation (slope), low pH, wind erosion, low available water capacity	Equipment limitation (slope), low pH, wind erosion, low available water capacity
75B:		
Drury	Crusting, water erosion	Water erosion
87A:		
Dickinson	Low pH, wind erosion, low available water capacity	Low pH, wind erosion, low available water capacity
87B:		
Dickinson	Low pH, wind erosion, low available water capacity	Low pH, wind erosion, low available water capacity
109A:		
Racoon	Ponding, wetness, low pH, crusting, restricted permeability	Ponding, wetness, restricted trafficability, low pH

Table 5.--Limitations and Hazards Affecting Cropland and Pastureland--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pastureland
131A:		
Alvin	Low pH, wind erosion, moderate available water capacity	Low pH, wind erosion
131B:		
Alvin	Low pH, water erosion, wind erosion, moderate available water capacity	Low pH, water erosion, wind erosion
131C:		
Alvin	Low pH, water erosion, wind erosion, moderate available water capacity	Low pH, water erosion, wind erosion
131F:		
Alvin	Equipment limitation (slope), low pH, water erosion, wind erosion, moderate available water capacity	Equipment limitation (slope), low pH, water erosion, wind erosion
142A:		
Patton	Ponding, wetness	Ponding, wetness, restricted trafficability
142A+:		
Patton	Ponding, wetness	Ponding, wetness, restricted trafficability
164A:		
Stoy	Low pH, crusting, restricted permeability	Restricted trafficability, low pH
164B:		
Stoy	Low pH, crusting, water erosion, restricted permeability	Restricted trafficability, low pH, water erosion
165A:		
Weir	Ponding, wetness, low pH, crusting, restricted permeability	Ponding, wetness, restricted trafficability, low pH
173A:		
McGary	Low pH, crusting	Restricted trafficability, low pH
173B2:		
McGary	Low pH, crusting, water erosion	Restricted trafficability, low pH, water erosion
176A:		
Marissa	No major limitations	Restricted trafficability
178A:		
Ruark	Ponding, wetness, low pH, crusting	Ponding, wetness, restricted trafficability, low pH
184A:		
Roby	Low pH, wind erosion, low available water capacity	Restricted trafficability, low pH, wind erosion, low available water capacity

Table 5.--Limitations and Hazards Affecting Cropland and Pastureland--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pastureland
208A:		
Sexton	Ponding, wetness, low pH, crusting, moderate available water capacity, restricted permeability	Ponding, wetness, restricted trafficability, low pH
214B:		
Hosmer	Limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability	Limited rooting depth (fragipan), low pH, water erosion
214B2:		
Hosmer	Limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability	Limited rooting depth (fragipan), low pH, water erosion
214C2:		
Hosmer	Limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability	Limited rooting depth (fragipan), low pH, water erosion
214C3:		
Hosmer	Limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability	Limited rooting depth (fragipan), low pH, water erosion
231A:		
Evansville	Ponding, wetness, crusting	Ponding, wetness, restricted trafficability
301B:		
Grantsburg	Limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability	Limited rooting depth (fragipan), low pH, water erosion
308B:		
Alford	Low pH, crusting, water erosion	Low pH, water erosion
308B2:		
Alford	Low pH, crusting, water erosion	Low pH, water erosion
308C2:		
Alford	Low pH, crusting, water erosion	Low pH, water erosion
308C3:		
Alford	Low pH, crusting, water erosion	Low pH, water erosion

Table 5.--Limitations and Hazards Affecting Cropland and Pastureland--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pastureland
308D2:		
Alford	Equipment limitation (slope), low pH, crusting, water erosion	Equipment limitation (slope), low pH, water erosion
308D3:		
Alford	Equipment limitation (slope), low pH, crusting, water erosion	Equipment limitation (slope), low pH, water erosion
337A:		
Creal	Low pH, crusting	Restricted trafficability, low pH
339F:		
Wellston	Equipment limitation (slope), low pH, crusting, water erosion, moderate available water capacity	Equipment limitation (slope), low pH, water erosion
340C2:		
Zanesville	Limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability	Limited rooting depth (fragipan), low pH, water erosion
340C3:		
Zanesville	Limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability	Limited rooting depth (fragipan), low pH, water erosion
340D2:		
Zanesville	Equipment limitation (slope), limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability	Equipment limitation (slope), limited rooting depth (fragipan), low pH, water erosion
340D3:		
Zanesville	Equipment limitation (slope), limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability	Equipment limitation (slope), limited rooting depth (fragipan), low pH, water erosion
434A:		
Ridgway	Limited rooting depth (sand and gravel), low pH, crusting	Limited rooting depth (sand and gravel), low pH
434B:		
Ridgway	Limited rooting depth (sand and gravel), low pH, crusting, water erosion	Limited rooting depth (sand and gravel), low pH, water erosion

Table 5.--Limitations and Hazards Affecting Cropland and Pastureland--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pastureland
434C2:		
Ridgway	Limited rooting depth (sand and gravel), low pH, crusting, water erosion	Limited rooting depth (sand and gravel), low pH, water erosion
436A:		
Meadowbank	Low pH	Low pH
436B:		
Meadowbank	Low pH, water erosion	Low pH, water erosion
445A:		
Newhaven	No major limitations	Restricted trafficability
446A:		
Springerton	Ponding, wetness	Ponding, wetness, restricted trafficability
453B:		
Muren	Low pH, crusting, water erosion	Low pH, water erosion
467B2:		
Markland	Low pH, crusting, water erosion	Low pH, water erosion
467C2:		
Markland	Low pH, crusting, water erosion	Low pH, water erosion
467C3:		
Markland	Low pH, crusting, water erosion	Low pH, water erosion
482B:		
Uniontown	Low pH, crusting, water erosion	Low pH, water erosion
482B2:		
Uniontown	Low pH, crusting, water erosion	Low pH, water erosion
482C2:		
Uniontown	Low pH, crusting, water erosion	Low pH, water erosion
482C3:		
Uniontown	Low pH, crusting, water erosion	Low pH, water erosion
483A:		
Henshaw	Wetness, low pH, crusting	Restricted trafficability, low pH
484A:		
Harco	No major limitations	Restricted trafficability
585F:		
Negley	Equipment limitation (slope), low pH, crusting, water erosion, moderate available water capacity	Equipment limitation (slope), low pH, water erosion

Table 5.--Limitations and Hazards Affecting Cropland and Pastureland--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pastureland
630C3:		
Navlys	Low pH, crusting, water erosion	Low pH, water erosion
630D3:		
Navlys	Equipment limitation (slope), low pH, crusting, water erosion	Equipment limitation (slope), low pH, water erosion
750A:		
Skelton	Low pH, crusting, wind erosion	Low pH, wind erosion
750B:		
Skelton	Low pH, crusting, wind erosion	Low pH, wind erosion
750C2:		
Skelton	Low pH, crusting, water erosion, wind erosion	Low pH, water erosion, wind erosion
751A:		
Crawleyville	Wetness, low pH, wind erosion	Restricted trafficability, low pH, wind erosion
784F:		
Berks	Equipment limitation (slope), low pH, water erosion, very low available water capacity	Equipment limitation (slope), low pH, water erosion, very low available water capacity
898G:		
Sylvan	Equipment limitation (slope), low pH, crusting, water erosion	Equipment limitation (slope), low pH, water erosion
Hickory	Equipment limitation (slope), low pH, crusting, water erosion	Equipment limitation (slope), low pH, water erosion
908G:		
Kell	Equipment limitation (slope), low pH, crusting, water erosion, low available water capacity	Equipment limitation (slope), low pH, water erosion, low available water capacity
Hickory	Equipment limitation (slope), low pH, crusting, water erosion	Equipment limitation (slope), low pH, water erosion
929D3:		
Hickory	Equipment limitation (slope), low pH, crusting, water erosion	Equipment limitation (slope), low pH, water erosion
Ava	Equipment limitation (slope), limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability	Equipment limitation (slope), limited rooting depth (fragipan), low pH, water erosion

Table 5.--Limitations and Hazards Affecting Cropland and Pastureland--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pastureland
1288A:		
Petrolia	Flooding, ponding, wetness, low pH	Flooding, ponding, wetness, restricted trafficability, low pH
3092A:		
Sarpy	Flooding, high pH, low available water capacity	Flooding, high pH, low available water capacity
3103L:		
Houghton	Flooding, ponding, wetness, low pH, wind erosion, subsidence	Flooding, ponding, wetness, restricted trafficability, low pH, wind erosion, subsidence
3108A:		
Bonnie	Flooding, ponding, wetness, low pH, crusting	Flooding, ponding, wetness, restricted trafficability, low pH
3142A:		
Patton	Flooding, ponding, wetness	Flooding, ponding, wetness, restricted trafficability
3178A:		
Ruark	Flooding, ponding, wetness, low pH, crusting	Flooding, ponding, wetness, restricted trafficability, low pH
3231A:		
Evansville	Flooding, ponding, wetness, crusting	Flooding, ponding, wetness, restricted trafficability
3302A:		
Ambraw	Flooding, ponding, wetness, low pH	Flooding, ponding, wetness, restricted trafficability, low pH
3304A:		
Landes	Flooding, low pH, moderate available water capacity	Flooding, low pH
3331A:		
Haymond	Flooding, low pH, crusting	Flooding, low pH
3333A:		
Wakeland	Flooding, wetness, low pH, crusting	Flooding, restricted trafficability, low pH
3382A:		
Belknap	Flooding, wetness, low pH	Flooding, restricted trafficability, low pH
3420A:		
Piopolis	Flooding, ponding, wetness, low pH, crusting, restricted permeability	Flooding, ponding, wetness, restricted trafficability, low pH
3465A:		
Montgomery	Flooding, ponding, wetness, high pH, poor tilth, restricted permeability	Flooding, ponding, wetness, restricted trafficability, high pH

Table 5.--Limitations and Hazards Affecting Cropland and Pastureland--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pastureland
3524A:		
Zipp	Flooding, ponding, wetness, low pH, poor tilth, moderate available water capacity, restricted permeability	Flooding, ponding, wetness, restricted trafficability, low pH
3597A:		
Armiesburg	Flooding, high pH	Flooding, high pH
3601A:		
Nolin	Flooding, low pH, crusting	Flooding, low pH
3602A:		
Newark	Flooding, wetness, low pH	Flooding, restricted trafficability, low pH
3665A:		
Stonelick	Flooding, high pH, crusting, moderate available water capacity	Flooding, high pH
7087A:		
Dickinson	Flooding, low pH, low available water capacity	Flooding, low pH, low available water capacity
7109A:		
Racoon	Ponding, wetness, low pH, crusting, restricted permeability	Ponding, wetness, restricted trafficability, low pH
7131A:		
Alvin	Low pH, wind erosion, moderate available water capacity	Low pH, wind erosion
7131B:		
Alvin	Low pH, water erosion, wind erosion, moderate available water capacity	Low pH, water erosion, wind erosion
7142A:		
Patton	Ponding, wetness	Ponding, wetness, restricted trafficability
7142A+:		
Patton	Ponding, wetness	Ponding, wetness, restricted trafficability
7173A:		
McGary	Low pH, crusting	Restricted trafficability, low pH
7173B2:		
McGary	Low pH, crusting, water erosion	Restricted trafficability, low pH, water erosion
7176A:		
Marissa	No major limitations	Restricted trafficability
7178A:		
Ruark	Ponding, wetness, low pH, crusting	Ponding, wetness, restricted trafficability, low pH

Table 5.--Limitations and Hazards Affecting Cropland and Pastureland--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pastureland
7184A:		
Roby	Low pH, wind erosion, moderate available water capacity	Restricted trafficability, low pH, wind erosion
7208A:		
Sexton	Ponding, wetness, low pH, crusting, moderate available water capacity, restricted permeability	Ponding, wetness, restricted trafficability, low pH
7434A:		
Ridgway	Limited rooting depth (sand and gravel), low pH, crusting	Limited rooting depth (sand and gravel), low pH
7434B:		
Ridgway	Limited rooting depth (sand and gravel), low pH, crusting, water erosion	Limited rooting depth (sand and gravel), low pH, water erosion
7436A:		
Meadowbank	Low pH	Low pH
7445A:		
Newhaven	No major limitations	Restricted trafficability
7446A:		
Springerton	Ponding, wetness	Ponding, wetness, restricted trafficability
7462A:		
Sciotoville	Low pH, crusting, moderate available water capacity	Low pH
7462B:		
Sciotoville	Low pH, crusting, water erosion, moderate available water capacity	Low pH, water erosion
7465A:		
Montgomery	Ponding, wetness, high pH, poor tilth, restricted permeability	Ponding, wetness, restricted trafficability, high pH
7467B2:		
Markland	Low pH, crusting, water erosion	Low pH, water erosion
7467C2:		
Markland	Low pH, crusting, water erosion	Low pH, water erosion
7482B:		
Uniontown	Low pH, crusting, water erosion	Low pH, water erosion
7482C2:		
Uniontown	Low pH, crusting, water erosion	Low pH, water erosion
7483A:		
Henshaw	Wetness, low pH, crusting	Restricted trafficability, low pH

Table 5.--Limitations and Hazards Affecting Cropland and Pastureland--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pastureland
7484A:		
Harco	Wetness	Restricted trafficability
7524A:		
Zipp	Ponding, wetness, low pH, poor tilth, moderate available water capacity, restricted permeability	Ponding, wetness, restricted trafficability, low pH
7524A+:		
Zipp	Ponding, wetness, crusting, moderate available water capacity, restricted permeability	Ponding, wetness, restricted trafficability
7750A:		
Skelton	Low pH, crusting, wind erosion	Low pH, wind erosion
7750B:		
Skelton	Low pH, crusting, wind erosion	Low pH, wind erosion
7750C2:		
Skelton	Low pH, crusting, water erosion, wind erosion	Low pH, water erosion, wind erosion
7751A:		
Crawleyville	Wetness, low pH, wind erosion	Restricted trafficability, low pH, wind erosion
7787A:		
Banlic	Wetness, low pH, crusting, moderate available water capacity, restricted permeability	Restricted trafficability, low pH
7812E:		
Typic Hapludalfs	Equipment limitation (slope), low pH, crusting, water erosion, moderate available water capacity	Equipment limitation (slope), low pH, water erosion
8072A:		
Sharon	Flooding, low pH, crusting	Flooding, low pH
8460A:		
Ginat	Flooding, ponding, wetness, low pH, crusting, restricted permeability	Flooding, ponding, wetness, restricted trafficability, low pH

Table 6.--Land Capability and Yields per Acre of Crops and Pasture

(Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land capability	Corn	Grain sorghum	Soybeans	Winter wheat	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
2A:							
Cisne---------------	3w	135	102	41	53	4.18	6.20
3A:							
Hoyleton------------	2w	132	103	42	52	4.18	6.20
3B:							
Hoyleton------------	2e	131	102	42	51	4.18	6.10
8D2:							
Hickory, eroded-----	4e	93	---	31	37	3.10	4.40
8F:							
Hickory-------------	6e	---	---	---	---	2.20	3.20
12A:							
Wynoose-------------	3w	115	97	38	46	3.84	5.70
13A:							
Bluford-------------	2w	122	99	40	50	3.05	4.50
13B:							
Bluford-------------	2e	121	98	40	49	3.00	4.50
13B2:							
Bluford, eroded-----	2e	116	94	38	48	2.91	4.20
14B:							
Ava-----------------	2e	120	95	39	50	2.91	4.20
14B2:							
Ava, eroded---------	2e	113	89	36	47	2.73	4.10
14C2:							
Ava, eroded---------	3e	109	86	35	45	2.65	3.90
14C3:							
Ava, severely eroded	3e	90	71	29	37	2.20	3.20
15B:							
Parke---------------	2e	138	104	43	53	3.30	4.80
15C2:							
Parke, eroded-------	3e	128	97	40	49	3.00	4.50
15D2:							
Parke, eroded-------	4e	117	88	37	45	2.80	4.00
19F:							
Sylvan--------------	6e	---	---	---	---	2.80	4.00
53B:							
Bloomfield----------	3s	103	---	33	44	3.50	5.10
53C:							
Bloomfield----------	4e	100	---	32	43	3.40	5.00

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Grain sorghum	Soybeans	Winter wheat	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
53D:							
Bloomfield----------	4e	95	---	30	40	3.20	4.70
75B:							
Drury---------------	2e	154	---	48	60	5.15	7.60
87A:							
Dickinson-----------	2s	128	---	42	51	3.05	4.50
87B:							
Dickinson-----------	2e	127	---	42	51	3.02	4.50
109A:							
Racoon--------------	3w	130	103	41	51	3.50	5.20
131A:							
Alvin---------------	2s	135	---	44	53	3.40	5.00
131B:							
Alvin---------------	2e	134	---	44	52	3.40	5.00
131C:							
Alvin---------------	3e	131	---	43	51	3.30	4.60
131F:							
Alvin---------------	6e	---	---	---	---	2.00	3.00
142A:							
Patton--------------	2w	160	---	52	61	4.86	7.17
142A+:							
Patton, overwash----	2w	160	---	52	61	4.86	7.17
164A:							
Stoy----------------	2w	131	102	42	52	4.20	6.20
164B:							
Stoy----------------	2e	130	101	42	51	4.10	6.00
165A:							
Weir----------------	3w	127	101	41	51	4.10	6.00
173A:							
McGary--------------	2w	119	---	40	51	3.80	5.70
173B2:							
McGary, eroded------	2e	111	---	37	47	3.60	5.20
176A:							
Marissa-------------	2w	150	---	48	62	4.90	7.20
178A:							
Ruark---------------	3w	118	---	40	50	3.96	5.83
184A:							
Roby----------------	2s	131	---	45	52	4.18	6.17
208A:							
Sexton--------------	3w	142	---	45	57	4.41	6.50

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Grain sorghum	Soybeans	Winter wheat	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
214B:							
Hosmer	2e	125	98	41	51	3.30	4.70
214B2:							
Hosmer, eroded	2e	117	92	38	48	3.00	4.40
214C2:							
Hosmer, eroded	3e	113	89	37	47	3.00	4.20
214C3:							
Hosmer, severely eroded	4e	93	73	30	38	2.40	3.50
231A:							
Evansville	2w	163	116	50	59	4.50	6.70
301B:							
Grantsburg	2e	119	93	41	50	2.91	4.20
308B:							
Alford	2e	149	107	46	58	4.50	6.50
308B2:							
Alford, eroded	2e	143	103	44	56	4.30	6.30
308C2:							
Alford, eroded	3e	140	100	43	55	4.20	6.10
308C3:							
Alford, severely eroded	4e	129	93	40	51	3.90	5.50
308D2:							
Alford, eroded	4e	128	92	41	50	3.80	5.60
308D3:							
Alford, severely eroded	4e	117	84	36	46	3.60	5.00
337A:							
Creal	2w	136	106	43	53	3.62	5.30
339F:							
Wellston	6e	---	---	---	---	1.87	2.70
340C2:							
Zanesville, eroded	3e	101	---	34	42	3.20	4.60
340C3:							
Zanesville, severely eroded	4e	83	---	28	35	2.60	3.70
340D2:							
Zanesville, eroded	4e	92	---	31	39	2.87	4.30
340D3:							
Zanesville, severely eroded	6e	---	---	---	---	2.35	3.90

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Grain sorghum	Soybeans	Winter wheat	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
434A:							
Ridgway	1	148	99	45	55	4.07	6.00
434B:							
Ridgway	2e	146	98	45	54	4.03	6.00
434C2:							
Ridgway, eroded	3e	136	92	41	51	3.70	5.50
436A:							
Meadowbank	1	171	118	52	64	5.70	8.40
436B:							
Meadowbank	2e	169	117	51	63	5.60	8.30
445A:							
Newhaven	1	155	113	47	61	4.75	7.00
446A:							
Springerton	2w	162	118	51	63	4.90	7.20
453B:							
Muren	2e	146	107	45	54	4.60	6.70
467B2:							
Markland, eroded	3e	147	---	39	49	3.50	5.00
467C2:							
Markland, eroded	4e	142	---	38	48	3.40	4.80
467C3:							
Markland, severely eroded	6e	---	---	---	---	2.80	4.00
482B:							
Uniontown	2e	144	---	46	54	4.20	6.30
482B2:							
Uniontown, eroded	2e	139	---	44	52	4.10	6.00
482C2:							
Uniontown, eroded	3e	136	---	43	51	4.00	5.80
482C3:							
Uniontown, severely eroded	4e	126	---	40	47	3.70	5.30
483A:							
Henshaw	2w	144	105	45	54	4.41	6.50
484A:							
Harco	1	171	---	55	67	5.10	7.50
585F:							
Negley	6e	---	---	---	---	2.90	4.10
630C3:							
Navlys, severely eroded	4e	108	---	35	43	3.59	5.10

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Grain sorghum	Soybeans	Winter wheat	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
630D3:							
Navlys, severely eroded	4e	95	---	31	38	3.14	4.63
750A:							
Skelton	1	130	105	41	50	3.50	5.20
750B:							
Skelton	2e	129	104	41	49	3.50	5.10
750C2:							
Skelton, eroded	3e	121	98	38	46	3.40	4.80
751A:							
Crawleyville	2w	129	102	41	51	4.00	5.80
784F:							
Berks	6e	---	---	---	---	1.29	1.87
802B:							
Orthents, loamy	2e	---	---	---	---	---	---
865.							
Pits, gravel							
898G:							
Sylvan	7e	---	---	---	---	---	---
Hickory	7e	---	---	---	---	---	---
908G:							
Kell	7e	---	---	---	---	---	---
Hickory	7e	---	---	---	---	---	---
929D3:							
Hickory, severely eroded	6e	---	---	---	---	2.90	4.00
Ava, severely eroded	6e	79	62	25	32	1.90	2.80
1288A:							
Petrolia, undrained, frequently flooded	5w	---	---	---	---	---	---
3092A:							
Sarpy, frequently flooded	4s	90	---	31	---	3.05	4.50
3103L:							
Houghton, frequently flooded	8w	---	---	---	---	---	---
3108A:							
Bonnie, frequently flooded	3w	121	---	40	---	3.76	5.60
3142A:							
Patton, frequently flooded	2w	144	---	47	---	4.40	6.50

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Grain sorghum	Soybeans	Winter wheat	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
3178A: Ruark, frequently flooded	3w	106	---	36	---	3.60	5.20
3231A: Evansville, frequently flooded	2w	147	104	45	---	4.00	6.00
3302A: Ambraw, frequently flooded	3w	125	---	41	---	4.07	6.00
3304A: Landes, frequently flooded	3w	109	---	41	---	3.10	4.50
3331A: Haymond, frequently flooded	2w	147	---	46	---	4.68	6.90
3333A: Wakeland, frequently flooded	2w	141	---	46	---	4.17	6.20
3382A: Belknap, frequently flooded	3w	127	---	42	---	3.96	5.90
3420A: Piopolis, frequently flooded	3w	115	---	40	---	3.56	5.20
3465A: Montgomery, frequently flooded	3w	120	---	40	---	3.70	5.40
3524A: Zipp, frequently flooded	3w	111	---	38	---	3.50	5.10
3597A: Armiesburg, frequently flooded	3w	144	---	46	---	5.40	8.00
3601A: Nolin, frequently flooded	2w	129	97	41	---	3.10	4.70
3602A: Newark, frequently flooded	2w	117	91	39	---	3.50	5.10
3665A: Stonelick, frequently flooded	3w	116	---	35	---	3.00	4.40
7087A: Dickinson, rarely flooded	3s	128	---	42	51	3.05	4.50

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Grain sorghum	Soybeans	Winter wheat	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
7109A:							
Racoon, rarely flooded	3w	130	103	41	51	3.50	5.20
7131A:							
Alvin, rarely flooded	2s	135	---	44	53	4.00	4.80
7131B:							
Alvin, rarely flooded	2e	134	---	44	52	3.40	5.00
7142A:							
Patton, rarely flooded	2w	160	---	52	61	4.86	7.17
7142A+:							
Patton, rarely flooded, overwash	2w	160	---	52	61	4.86	7.17
7173A:							
McGary, rarely flooded	2w	119	---	40	51	3.80	5.70
7173B2:							
McGary, rarely flooded	2e	111	---	37	47	3.60	5.20
7176A:							
Marissa, rarely flooded	2w	150	---	48	62	4.90	7.20
7178A:							
Ruark, rarely flooded	3w	118	---	40	50	3.96	5.83
7184A:							
Roby, rarely flooded	2s	131	---	45	52	4.20	6.20
7208A:							
Sexton, rarely flooded	3w	142	---	45	57	4.41	6.50
7434A:							
Ridgway, rarely flooded	1	148	99	45	55	4.07	6.00
7434B:							
Ridgway, rarely flooded	2e	146	98	45	54	4.03	6.00
7436A:							
Meadowbank, rarely flooded	1	171	118	52	64	5.70	8.40
7445A:							
Newhaven, rarely flooded	1	155	113	47	61	4.75	7.00

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Grain sorghum	Soybeans	Winter wheat	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
7446A: Springerton, rarely flooded	2w	162	118	51	63	4.90	7.20
7462A: Sciotoville, rarely flooded	2w	126	---	42	53	3.60	5.30
7462B: Sciotoville, rarely flooded	2e	125	---	42	52	3.60	5.20
7465A: Montgomery, rarely flooded	3w	133	---	44	52	4.10	6.00
7467B2: Markland, rarely flooded	3e	147	---	39	49	3.50	5.00
7467C2: Markland, rarely flooded	4e	142	---	38	48	3.40	4.80
7482B: Uniontown, rarely flooded	2e	144	---	46	54	4.20	6.30
7482C2: Uniontown, rarely flooded	3e	136	---	43	51	4.00	5.80
7483A: Henshaw, rarely flooded	2w	144	105	45	54	4.41	6.50
7484A: Harco, rarely flooded	1	171	---	55	67	5.10	7.50
7524A: Zipp, rarely flooded	3w	123	---	42	47	3.80	5.70
7524A+: Zipp, rarely flooded, overwash	3w	123	---	42	47	3.80	5.70
7750A: Skelton, rarely flooded	1	130	105	41	50	3.50	5.20
7750B: Skelton, rarely flooded	2e	129	104	41	49	3.50	5.10
7750C2: Skelton, rarely flooded	3e	121	98	38	46	3.40	4.80

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Grain sorghum	Soybeans	Winter wheat	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
7751A:							
Crawleyville, rarely flooded------------	2w	129	102	41	51	4.00	5.80
7787A:							
Banlic, rarely flooded------------	2w	128	---	42	51	4.20	6.20
7812E:							
Typic Hapludalfs, rarely flooded-----	6e	---	---	---	---	---	---
8072A:							
Sharon, occasionally flooded------------	2w	148	---	48	57	4.30	6.30
8460A:							
Ginat, occasionally flooded------------	3w	128	---	44	53	4.00	5.80

* Animal unit month: The amount of forage required to feed one mature cow, of approximately 1,000 pounds weight, with or without a calf, for 30 days.

Table 7.--Prime Farmland

(Only the soils considered prime farmland are listed. Urban or built-up areas of the soils listed are not considered prime farmland. If a soil is prime farmland only under certain conditions, the conditions are specified in parentheses after the soil name)

Map symbol	Soil name
2A	Cisne silt loam, 0 to 2 percent slopes (where drained)
3A	Hoyleton silt loam, 0 to 2 percent slopes
3B	Hoyleton silt loam, 2 to 5 percent slopes
13A	Bluford silt loam, 0 to 2 percent slopes (where drained)
13B	Bluford silt loam, 2 to 5 percent slopes
13B2	Bluford silt loam, 2 to 5 percent slopes, eroded
14B	Ava silt loam, 2 to 5 percent slopes
14B2	Ava silt loam, 2 to 5 percent slopes, eroded
15B	Parke silt loam, 2 to 5 percent slopes
75B	Drury silt loam, 2 to 5 percent slopes
87A	Dickinson sandy loam, 0 to 2 percent slopes
87B	Dickinson sandy loam, 2 to 5 percent slopes
109A	Racoon silt loam, 0 to 2 percent slopes (where drained)
131A	Alvin fine sandy loam, 0 to 2 percent slopes
131B	Alvin fine sandy loam, 2 to 5 percent slopes
131C	Alvin fine sandy loam, 5 to 10 percent slopes
142A	Patton silty clay loam, 0 to 2 percent slopes (where drained)
142A+	Patton silt loam, 0 to 2 percent slopes, overwash (where drained)
164A	Stoy silt loam, 0 to 2 percent slopes
164B	Stoy silt loam, 2 to 5 percent slopes
173A	McGary silt loam, 0 to 2 percent slopes (where drained)
173B2	McGary silt loam, 2 to 5 percent slopes, eroded
176A	Marissa silt loam, 0 to 2 percent slopes (where drained)
178A	Ruark loam, 0 to 2 percent slopes (where drained)
184A	Roby fine sandy loam, 0 to 2 percent slopes
208A	Sexton silt loam, 0 to 2 percent slopes (where drained)
214B	Hosmer silt loam, 2 to 5 percent slopes
214B2	Hosmer silt loam, 2 to 5 percent slopes, eroded
231A	Evansville silt loam, 0 to 2 percent slopes (where drained)
301B	Grantsburg silt loam, 2 to 5 percent slopes
308B	Alford silt loam, 2 to 5 percent slopes
308B2	Alford silt loam, 2 to 5 percent slopes, eroded
337A	Creal silt loam, 0 to 2 percent slopes (where drained)
434A	Ridgway silt loam, 0 to 2 percent slopes
434B	Ridgway silt loam, 2 to 5 percent slopes
436A	Meadowbank silt loam, 0 to 2 percent slopes
436B	Meadowbank silt loam, 2 to 5 percent slopes
445A	Newhaven loam, 0 to 2 percent slopes
446A	Springerton loam, 0 to 2 percent slopes (where drained)
453B	Muren silt loam, 2 to 5 percent slopes
467B2	Markland silt loam, 2 to 5 percent slopes, eroded
482B	Uniontown silt loam, 2 to 5 percent slopes
482B2	Uniontown silt loam, 2 to 5 percent slopes, eroded
483A	Henshaw silt loam, 0 to 2 percent slopes
484A	Harco silt loam, 0 to 2 percent slopes
750A	Skelton fine sandy loam, 0 to 2 percent slopes
750B	Skelton fine sandy loam, 2 to 5 percent slopes
751A	Crawleyville fine sandy loam, 0 to 2 percent slopes
3108A	Bonnie silt loam, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
3142A	Patton silty clay loam, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
3178A	Ruark loam, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
3231A	Evansville silt loam, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
3302A	Ambraw clay loam, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)

Table 7.--Prime Farmland--Continued

Map symbol	Soil name
3304A	Landes fine sandy loam, 0 to 2 percent slopes, frequently flooded (where protected from flooding or not frequently flooded during the growing season)
3331A	Haymond silt loam, 0 to 3 percent slopes, frequently flooded (where protected from flooding or not frequently flooded during the growing season)
3333A	Wakeland silt loam, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
3382A	Belknap silt loam, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
3420A	Piopolis silty clay loam, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
3465A	Montgomery silty clay loam, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
3524A	Zipp silty clay, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
3597A	Armiesburg silty clay loam, 0 to 2 percent slopes, frequently flooded (where protected from flooding or not frequently flooded during the growing season)
3601A	Nolin silty clay loam, 0 to 2 percent slopes, frequently flooded (where protected from flooding or not frequently flooded during the growing season)
3602A	Newark silt loam, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
3665A	Stonelick loam, 0 to 2 percent slopes, frequently flooded (where protected from flooding or not frequently flooded during the growing season)
7087A	Dickinson sandy loam, 0 to 2 percent slopes, rarely flooded
7109A	Racoon silt loam, 0 to 2 percent slopes, rarely flooded (where drained)
7131A	Alvin fine sandy loam, 0 to 2 percent slopes, rarely flooded
7131B	Alvin fine sandy loam, 2 to 5 percent slopes, rarely flooded
7142A	Patton silty clay loam, 0 to 2 percent slopes, rarely flooded (where drained)
7142A+	Patton silt loam, 0 to 2 percent slopes, rarely flooded, overwash (where drained)
7173A	McGary silt loam, 0 to 2 percent slopes, rarely flooded (where drained)
7173B2	McGary silt loam, 2 to 5 percent slopes, eroded, rarely flooded
7176A	Marissa silt loam, 0 to 2 percent slopes, rarely flooded (where drained)
7178A	Ruark loam, 0 to 2 percent slopes, rarely flooded (where drained)
7184A	Roby fine sandy loam, 0 to 2 percent slopes, rarely flooded
7208A	Sexton silt loam, 0 to 2 percent slopes, rarely flooded (where drained)
7434A	Ridgway silt loam, 0 to 2 percent slopes, rarely flooded
7434B	Ridgway silt loam, 2 to 5 percent slopes, rarely flooded
7436A	Meadowbank silt loam, 0 to 2 percent slopes, rarely flooded
7445A	Newhaven loam, 0 to 2 percent slopes, rarely flooded
7446A	Springerton loam, 0 to 2 percent slopes, rarely flooded (where drained)
7462A	Sciotoville silt loam, 0 to 2 percent slopes, rarely flooded
7462B	Sciotoville silt loam, 2 to 5 percent slopes, rarely flooded
7465A	Montgomery silty clay loam, 0 to 2 percent slopes, rarely flooded (where drained)
7467B2	Markland silt loam, 2 to 5 percent slopes, eroded, rarely flooded
7482B	Uniontown silt loam, 2 to 5 percent slopes, rarely flooded
7483A	Henshaw silt loam, 0 to 2 percent slopes, rarely flooded
7484A	Harco silt loam, 0 to 2 percent slopes, rarely flooded
7524A	Zipp silty clay, 0 to 2 percent slopes, rarely flooded (where drained)
7524A+	Zipp silt loam, 0 to 2 percent slopes, rarely flooded, overwash (where drained)
7750A	Skelton fine sandy loam, 0 to 2 percent slopes, rarely flooded
7750B	Skelton fine sandy loam, 2 to 5 percent slopes, rarely flooded
7751A	Crawleyville fine sandy loam, 0 to 2 percent slopes, rarely flooded
7787A	Banlic silt loam, 0 to 2 percent slopes, rarely flooded (where drained)
8072A	Sharon silt loam, 0 to 2 percent slopes, occasionally flooded
8460A	Ginat silt loam, 0 to 2 percent slopes, occasionally flooded (where drained)

Table 8.--Map Units With Major Components of Hydric Soils

(This table lists only the map units in which major components are hydric soils. See text for a description of hydric qualities and definitions of the codes in the hydric criteria column)

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
2A:				
Cisne silt loam, 0 to 2 percent slopes	Cisne	90	Flats	2B3
12A:				
Wynoose silt loam, 0 to 2 percent slopes	Wynoose	90	Flats	2B3
109A:				
Racoon silt loam, 0 to 2 percent slopes	Racoon	90	Fans	2B3
142A:				
Patton silty clay loam, 0 to 2 percent slopes	Patton	90	Terraces (stream or lake)	2B3
142A+:				
Patton silt loam, 0 to 2 percent slopes, overwash	Patton, overwash	90	Terraces (stream or lake)	2B3
165A:				
Weir silt loam, 0 to 2 percent slopes	Weir	90	Flats	2B3
178A:				
Ruark loam, 0 to 2 percent slopes	Ruark	90	Terraces	2B3
208A:				
Sexton silt loam, 0 to 2 percent slopes	Sexton	90	Terraces	2B3
231A:				
Evansville silt loam, 0 to 2 percent slopes	Evansville	90	Lake plains	2B3
446A:				
Springerton loam, 0 to 2 percent slopes	Springerton	90	Terraces	2B3
1288A:				
Petrolia silty clay loam, undrained, 0 to 2 percent slopes, frequently flooded	Petrolia, undrained, frequently flooded	90	Flood plains	2B3,3
3103L:				
Houghton muck, 0 to 2 percent slopes, frequently flooded, long duration	Houghton, frequently flooded	90	Flood plains	1,3,4
3108A:				
Bonnie silt loam, 0 to 2 percent slopes, frequently flooded	Bonnie, frequently flooded	90	Flood plains	2B3
3142A:				
Patton silty clay loam, 0 to 2 percent slopes, frequently flooded	Patton, frequently flooded	90	Terraces (stream or lake)	2B3

Table 8.--Map Units With Major Components of Hydric Soils--Continued

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
3178A:				
Ruark loam, 0 to 2 percent slopes, frequently flooded	Ruark, frequently flooded	90	Terraces	2B3
3231A:				
Evansville silt loam, 0 to 2 percent slopes, frequently flooded	Evansville, frequently flooded	90	Lake plains	2B3
3302A:				
Ambraw clay loam, 0 to 2 percent slopes, frequently flooded	Ambraw, frequently flooded	90	Flood plains	2B3
3420A:				
Piopolis silty clay loam, 0 to 2 percent slopes, frequently flooded	Piopolis, frequently flooded	90	Flood plains	2B3
3465A:				
Montgomery silty clay loam, 0 to 2 percent slopes, frequently flooded	Montgomery, frequently flooded	90	Flood plains	2B3
3524A:				
Zipp silty clay, 0 to 2 percent slopes, frequently flooded	Zipp, frequently flooded	90	Lake plains	2B3
7109A:				
Racoon silt loam, 0 to 2 percent slopes, rarely flooded	Racoon, rarely flooded	90	Fans	2B3
7142A:				
Patton silty clay loam, 0 to 2 percent slopes, rarely flooded	Patton, rarely flooded	90	Terraces (stream or lake)	2B3
7142A+:				
Patton silt loam, 0 to 2 percent slopes, rarely flooded, overwash	Patton, rarely flooded, overwash	90	Terraces (stream or lake)	2B3
7178A:				
Ruark loam, 0 to 2 percent slopes, rarely flooded	Ruark, rarely flooded	90	Terraces	2B3
7208A:				
Sexton silt loam, 0 to 2 percent slopes, rarely flooded	Sexton, rarely flooded	90	Terraces	2B3
7446A:				
Springerton loam, 0 to 2 percent slopes, rarely flooded	Springerton, rarely flooded	90	Terraces	2B3
7465A:				
Montgomery silty clay loam, 0 to 2 percent slopes, rarely flooded	Montgomery, rarely flooded	90	Flood plains	2B3
7524A:				
Zipp silty clay, 0 to 2 percent slopes, rarely flooded	Zipp, rarely flooded	90	Lake plains	2B3

Table 8.--Map Units With Major Components of Hydric Soils--Continued

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
7524A+:				
Zipp silt loam, 0 to 2 percent slopes, rarely flooded, overwash	Zipp, rarely flooded, overwash	90	Lake plains	2B3
8460A:				
Ginat silt loam, 0 to 2 percent slopes, occasionally flooded	Ginat, occasionally flooded	90	Terraces	2B3

Table 9.--Map Units With Minor Components of Hydric Soils

(This table lists only the map units that have hydric soils as minor components. A few components may not be mapped in this survey area but are part of the map unit concept for the MLRA. See text for a description of hydric qualities and definitions of the codes in the hydric criteria column)

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
3A:				
Hoyleton silt loam, 0 to 2 percent slopes	Cisne	5	Flats	2B3
13A:				
Bluford silt loam, 0 to 2 percent slopes	Wynoose	5	Flats	2B3
164A:				
Stoy silt loam, 0 to 2 percent slopes	Weir	5	Flats	2B3
173A:				
McGary silt loam, 0 to 2 percent slopes	Sexton	5	Depressions on terraces	2B3
184A:				
Roby fine sandy loam, 0 to 2 percent slopes	Ruark	5	Depressions on terraces	2B3
337A:				
Creal silt loam, 0 to 2 percent slopes	Racoon	5	Depressions	2B3
445A:				
Newhaven loam, 0 to 2 percent slopes	Springerton	5	Depressions on terraces	2B3
483A:				
Henshaw silt loam, 0 to 2 percent slopes	Patton	5	Depressions	2B3
484A:				
Harco silt loam, 0 to 2 percent slopes	Montgomery	3	Depressions	2B3
	Patton	3	Depressions	2B3
750A:				
Skelton fine sandy loam, 0 to 2 percent slopes	Ruark	3	Depressions on terraces	2B3
	Sexton	3	Depressions on terraces	2B3
751A:				
Crawleyville fine sandy loam, 0 to 2 percent slopes	Ruark	5	Depressions on terraces	2B3
3333A:				
Wakeland silt loam, 0 to 2 percent slopes, frequently flooded	Birds, frequently flooded	5	Depressions on flood plains	2B3
3382A:				
Belknap silt loam, 0 to 2 percent slopes, frequently flooded	Bonnie, frequently flooded	3	Depressions on flood plains	2B3
	Piopolis, frequently flooded	3	Depressions on flood plains	2B3

Table 9.--Map Units With Minor Components of Hydric Soils--Continued

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
3602A:				
Newark silt loam, 0 to 2 percent slopes, frequently flooded	Petrolia, frequently flooded	5	Depressions on flood plains	2B3
7173A:				
McGary silt loam, 0 to 2 percent slopes, rarely flooded	Montgomery, rarely flooded	2	Depressions	2B3
	Sexton, rarely flooded	2	Depressions	2B3
	Zipp, rarely flooded	2	Depressions	2B3
7184A:				
Roby fine sandy loam, 0 to 2 percent slopes, rarely flooded	Ruark, rarely flooded	5	Depressions on terraces	2B3
7445A:				
Newhaven loam, 0 to 2 percent slopes, rarely flooded	Springerton, rarely flooded	5	Depressions on terraces	2B3
7462A:				
Sciotoville silt loam, 0 to 2 percent slopes, rarely flooded	Ginat, rarely flooded	2	Depressions on terraces	2B3
7483A:				
Henshaw silt loam, 0 to 2 percent slopes, rarely flooded	Ginat, rarely flooded	3	Depressions	2B3
	Patton, rarely flooded	3	Depressions	2B3
7484A:				
Harco silt loam, 0 to 2 percent slopes, rarely flooded	Patton, rarely flooded	5	Depressions on terraces	2B3
7750A:				
Skelton fine sandy loam, 0 to 2 percent slopes, rarely flooded	Ruark, rarely flooded	3	Depressions on terraces	2B3
	Sexton, rarely flooded	3	Depressions on terraces	2B3
7751A:				
Crawleyville fine sandy loam, 0 to 2 percent slopes, rarely flooded	Ruark, rarely flooded	5	Depressions on terraces	2B3
7787A:				
Banlic silt loam, 0 to 2 percent slopes, rarely flooded	Bonnie, rarely flooded	5	Depressions on flood plains	2B3

Table 10a.--Forestland Management

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. See text for definitions of terms used in this table)

Map symbol and soil name	Limitations affecting construction of haul roads and log landings	Suitability for log landings	Suitability for use of harvesting equipment
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
2A:			
Cisne	Moderate Low strength	Poorly suited Wetness Low strength	Moderately suited Low strength
3A:			
Hoyleton	Moderate Low strength	Moderately suited Low strength Wetness	Moderately suited Low strength
3B:			
Hoyleton	Moderate Low strength	Moderately suited Low strength Wetness	Moderately suited Low strength
8D2:			
Hickory, eroded	Moderate Low strength	Poorly suited Slope Low strength	Moderately suited Low strength
8F:			
Hickory	Moderate Slope	Poorly suited Slope Low strength	Moderately suited Low strength Slope
12A:			
Wynoose	Moderate Low strength	Poorly suited Ponding Wetness Low strength	Moderately suited Low strength
13A:			
Bluford	Moderate Low strength	Moderately suited Wetness Low strength	Moderately suited Low strength
13B:			
Bluford	Moderate Low strength	Moderately suited Wetness Low strength	Moderately suited Low strength
13B2:			
Bluford, eroded	Moderate Low strength	Moderately suited Wetness Low strength	Moderately suited Low strength
14B:			
Ava	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
14B2:			
Ava, eroded	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings	Suitability for log landings	Suitability for use of harvesting equipment
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
14C2:			
Ava, eroded	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
14C3:			
Ava, severely eroded	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
15B:			
Parke	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
15C2:			
Parke, eroded	Moderate Low strength Landslides	Moderately suited Low strength Slope Landslides	Moderately suited Low strength
15D2:			
Parke, eroded	Moderate Low strength Landslides	Poorly suited Slope Low strength Landslides	Moderately suited Low strength
19F:			
Sylvan	Moderate Slope	Poorly suited Slope Low strength	Moderately suited Low strength Slope
53B:			
Bloomfield	Moderate Sandiness	Moderately suited Sandiness	Moderately suited Sandiness
53C:			
Bloomfield	Moderate Sandiness	Moderately suited Sandiness Slope	Moderately suited Sandiness
53D:			
Bloomfield	Moderate Sandiness	Poorly suited Slope Sandiness	Moderately suited Sandiness
75B:			
Drury	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
87A:			
Dickinson	Slight	Well suited	Well suited
87B:			
Dickinson	Slight	Well suited	Well suited
109A:			
Racoon	Moderate Low strength	Poorly suited Ponding Wetness Low strength	Moderately suited Low strength

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings	Suitability for log landings	Suitability for use of harvesting equipment
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
131A:			
Alvin	Slight	Well suited	Well suited
131B:			
Alvin	Slight	Well suited	Well suited
131C:			
Alvin	Slight	Moderately suited Slope	Well suited
131F:			
Alvin	Moderate Slope	Poorly suited Slope	Moderately suited Slope
142A:			
Patton	Moderate Low strength	Poorly suited Ponding Wetness Low strength	Moderately suited Low strength
142A+:			
Patton, overwash	Moderate Low strength	Poorly suited Ponding Wetness Low strength	Moderately suited Low strength
164A:			
Stoy	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
164B:			
Stoy	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
165A:			
Weir	Moderate Low strength	Poorly suited Ponding Wetness Low strength	Moderately suited Low strength
173A:			
McGary	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
173B2:			
McGary, eroded	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
176A:			
Marissa	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
178A:			
Ruark	Moderate Low strength	Poorly suited Ponding Wetness Low strength	Moderately suited Low strength
184A:			
Roby	Slight	Well suited	Well suited

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings	Suitability for log landings	Suitability for use of harvesting equipment
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
208A:			
Sexton	Moderate Low strength	Poorly suited Ponding Wetness Low strength	Moderately suited Low strength
214B:			
Hosmer	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
214B2:			
Hosmer, eroded	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
214C2:			
Hosmer, eroded	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
214C3:			
Hosmer, severely eroded	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
231A:			
Evansville	Moderate Low strength	Poorly suited Ponding Wetness Low strength	Moderately suited Low strength
301B:			
Grantsburg	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
308B:			
Alford	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
308B2:			
Alford, eroded	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
308C2:			
Alford, eroded	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
308C3:			
Alford, severely eroded	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
308D2:			
Alford, eroded	Moderate Low strength	Poorly suited Slope Low strength	Moderately suited Low strength

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings	Suitability for log landings	Suitability for use of harvesting equipment
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
308D3:			
Alford, severely eroded	Moderate Low strength	Poorly suited Slope Low strength	Moderately suited Low strength
337A:			
Creal	Moderate Low strength	Moderately suited Low strength Wetness	Moderately suited Low strength
339F:			
Wellston	Moderate Slope	Poorly suited Slope Low strength	Moderately suited Low strength Slope
340C2:			
Zanesville, eroded	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
340C3:			
Zanesville, severely eroded	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
340D2:			
Zanesville, eroded	Moderate Low strength	Poorly suited Slope Low strength	Moderately suited Low strength
340D3:			
Zanesville, severely eroded	Moderate Low strength	Poorly suited Slope Low strength	Moderately suited Low strength
434A:			
Ridgway	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
434B:			
Ridgway	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
434C2:			
Ridgway, eroded	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
436A:			
Meadowbank	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
436B:			
Meadowbank	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings	Suitability for log landings	Suitability for use of harvesting equipment
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
445A:			
Newhaven	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
446A:			
Springerton	Moderate Low strength	Poorly suited Ponding Wetness Low strength	Moderately suited Low strength
453B:			
Muren	Moderate Low strength	Moderately suited Low strength Wetness	Moderately suited Low strength
467B2:			
Markland, eroded	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
467C2:			
Markland, eroded	Moderate Low strength Landslides	Moderately suited Low strength Slope Landslides	Moderately suited Low strength
467C3:			
Markland, severely eroded	Moderate Low strength Landslides	Moderately suited Low strength Slope Landslides	Moderately suited Low strength
482B:			
Uniontown	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
482B2:			
Uniontown, eroded	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
482C2:			
Uniontown, eroded	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
482C3:			
Uniontown, severely eroded	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
483A:			
Henshaw	Moderate Low strength	Moderately suited Low strength Wetness	Moderately suited Low strength
484A:			
Harco	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings	Suitability for log landings	Suitability for use of harvesting equipment
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
585F:			
Negley	Moderate Landslides Slope	Poorly suited Slope Landslides Low strength	Moderately suited Low strength Slope
630C3:			
Navlys, severely eroded	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
630D3:			
Navlys, severely eroded	Moderate Slope	Poorly suited Slope Low strength	Moderately suited Low strength
750A:			
Skelton	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
750B:			
Skelton	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
750C2:			
Skelton, eroded	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
751A:			
Crawleyville	Slight	Poorly suited Wetness	Well suited
784F:			
Berks	Moderate Slope Restrictive layer	Poorly suited Slope Low strength	Moderately suited Low strength Slope
802B:			
Orthents, loamy	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
865:			
Pits, gravel	Not rated	Not rated	Not rated
898G:			
Sylvan	Severe Slope Low strength	Poorly suited Slope Low strength	Poorly suited Slope Low strength
Hickory	Severe Slope Low strength	Poorly suited Slope Low strength	Poorly suited Slope Low strength

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings	Suitability for log landings	Suitability for use of harvesting equipment
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
908G:			
Kell	Severe Slope	Poorly suited Slope Low strength	Poorly suited Slope Low strength
Hickory	Severe Slope Low strength	Poorly suited Slope Low strength	Poorly suited Slope Low strength
929D3:			
Hickory, severely eroded	Moderate Low strength	Poorly suited Slope Low strength	Moderately suited Low strength
Ava, severely eroded	Moderate Low strength	Poorly suited Slope Low strength	Moderately suited Low strength
1288A:			
Petrolia, undrained, frequently flooded	Severe Flooding Wetness Low strength	Poorly suited Ponding Flooding Wetness Low strength	Poorly suited Wetness Low strength
3092A:			
Sarpy, frequently flooded	Severe Flooding	Poorly suited Flooding	Well suited
3103L:			
Houghton, frequently flooded	Severe Flooding	Poorly suited Ponding Flooding Low strength Wetness	Poorly suited Low strength
3108A:			
Bonnie, frequently flooded	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength
3142A:			
Patton, frequently flooded	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings	Suitability for log landings	Suitability for use of harvesting equipment
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
3178A:			
Ruark, frequently flooded------------	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength
3231A:			
Evansville, frequently flooded	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength
3302A:			
Ambraw, frequently flooded------------	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength
3304A:			
Landes, frequently flooded------------	Severe Flooding Low strength	Poorly suited Flooding Low strength	Moderately suited Low strength
3331A:			
Haymond, frequently flooded------------	Severe Flooding Low strength	Poorly suited Flooding Low strength	Moderately suited Low strength
3333A:			
Wakeland, frequently flooded------------	Severe Flooding Low strength	Poorly suited Flooding Wetness Low strength	Moderately suited Low strength
3382A:			
Belknap, frequently flooded------------	Severe Flooding Low strength	Poorly suited Flooding Wetness Low strength	Moderately suited Low strength
3420A:			
Piopolis, frequently flooded------------	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings	Suitability for log landings	Suitability for use of harvesting equipment
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
3465A:			
Montgomery, frequently flooded	Severe Flooding Low strength Stickiness/slope	Poorly suited Ponding Flooding Wetness Low strength Stickiness; high plasticity index	Moderately suited Low strength Stickiness; high plasticity index
3524A:			
Zipp, frequently flooded-----------	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength
3597A:			
Armiesburg, frequently flooded	Severe Flooding Low strength	Poorly suited Flooding Low strength	Moderately suited Low strength
3601A:			
Nolin, frequently flooded-----------	Severe Flooding Low strength	Poorly suited Flooding Low strength	Moderately suited Low strength
3602A:			
Newark, frequently flooded-----------	Severe Flooding Low strength	Poorly suited Flooding Wetness Low strength	Moderately suited Low strength
3665A:			
Stonelick, frequently flooded	Severe Flooding Low strength	Poorly suited Flooding Low strength	Moderately suited Low strength
7087A:			
Dickinson, rarely flooded-----------	Severe Flooding Low strength	Poorly suited Flooding Low strength	Moderately suited Low strength
7109A:			
Racoon, rarely flooded-----------	Moderate Low strength	Poorly suited Ponding Wetness Low strength	Moderately suited Low strength
7131A:			
Alvin, rarely flooded-----------	Slight	Well suited	Well suited

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings	Suitability for log landings	Suitability for use of harvesting equipment
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
7131B:			
Alvin, rarely flooded	Slight	Well suited	Well suited
7142A:			
Patton, rarely flooded	Moderate Low strength	Poorly suited Ponding Wetness Low strength	Moderately suited Low strength
7142A+:			
Patton, rarely flooded, overwash	Moderate Low strength	Poorly suited Ponding Wetness Low strength	Moderately suited Low strength
7173A:			
McGary, rarely flooded	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
7173B2:			
McGary, rarely flooded	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
7176A:			
Marissa, rarely flooded	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
7178A:			
Ruark, rarely flooded	Moderate Low strength	Poorly suited Ponding Wetness Low strength	Moderately suited Low strength
7184A:			
Roby, rarely flooded	Slight	Well suited	Well suited
7208A:			
Sexton, rarely flooded	Moderate Low strength	Poorly suited Ponding Wetness Low strength	Moderately suited Low strength
7434A:			
Ridgway, rarely flooded	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
7434B:			
Ridgway, rarely flooded	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings	Suitability for log landings	Suitability for use of harvesting equipment
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
7436A:			
Meadowbank, rarely flooded	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
7445A:			
Newhaven, rarely flooded	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
7446A:			
Springerton, rarely flooded	Moderate Low strength	Poorly suited Ponding Wetness Low strength	Moderately suited Low strength
7462A:			
Sciotoville, rarely flooded	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
7462B:			
Sciotoville, rarely flooded	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
7465A:			
Montgomery, rarely flooded	Moderate Low strength Stickiness/slope	Poorly suited Ponding Wetness Low strength Stickiness; high plasticity index	Moderately suited Low strength Stickiness; high plasticity index
7467B2:			
Markland, rarely flooded	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
7467C2:			
Markland, rarely flooded	Moderate Low strength Landslides	Moderately suited Low strength Slope Landslides	Moderately suited Low strength
7482B:			
Uniontown, rarely flooded	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
7482C2:			
Uniontown, rarely flooded	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings	Suitability for log landings	Suitability for use of harvesting equipment
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
7483A:			
Henshaw, rarely flooded-----------	Moderate Low strength	Moderately suited Wetness Low strength	Moderately suited Low strength
7484A:			
Harco, rarely flooded-----------	Moderate Low strength	Moderately suited Low strength Wetness	Moderately suited Low strength
7524A:			
Zipp, rarely flooded	Moderate Low strength	Poorly suited Ponding Wetness Low strength	Moderately suited Low strength
7524A+:			
Zipp, rarely flooded, overwash--	Moderate Low strength	Poorly suited Ponding Wetness Low strength	Moderately suited Low strength
7750A:			
Skelton, rarely flooded-----------	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
7750B:			
Skelton, rarely flooded-----------	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
7750C2:			
Skelton, rarely flooded-----------	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
7751A:			
Crawleyville, rarely flooded-----------	Slight	Poorly suited Wetness	Well suited
7787A:			
Banlic, rarely flooded-----------	Moderate Low strength	Moderately suited Wetness Low strength	Moderately suited Low strength
7812E:			
Typic Hapludalfs, rarely flooded-----	Moderate Slope	Poorly suited Slope Low strength	Moderately suited Low strength

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings	Suitability for log landings	Suitability for use of harvesting equipment
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
8072A:			
Sharon, occasionally flooded	Moderate Flooding Low strength	Moderately suited Flooding Low strength	Moderately suited Low strength
8460A:			
Ginat, occasionally flooded	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength

Table 10b.--Forestland Management

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. See text for definitions of terms used in this table)

Map symbol and soil name	Suitability for mechanized site preparation	Limitations affecting prescribed burning
	Rating class and limiting features	Rating class and limiting features
2A:		
Cisne	Well suited	Moderate Restrictive layer
3A:		
Hoyleton	Well suited	Slight
3B:		
Hoyleton	Well suited	Slight
8D2:		
Hickory, eroded	Well suited	Slight
8F:		
Hickory	Poorly suited Slope	Slight
12A:		
Wynoose	Well suited	Moderate Restrictive layer
13A:		
Bluford	Well suited	Slight
13B:		
Bluford	Well suited	Slight
13B2:		
Bluford, eroded	Well suited	Slight
14B:		
Ava	Well suited	Slight
14B2:		
Ava, eroded	Well suited	Moderate Restrictive layer
14C2:		
Ava, eroded	Well suited	Moderate Restrictive layer
14C3:		
Ava, severely eroded	Well suited	Moderate Restrictive layer
15B:		
Parke	Well suited	Slight
15C2:		
Parke, eroded	Well suited	Slight
15D2:		
Parke, eroded	Well suited	Slight

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Suitability for mechanized site preparation	Limitations affecting prescribed burning
	Rating class and limiting features	Rating class and limiting features
19F:		
Sylvan	Poorly suited Slope	Slight
53B:		
Bloomfield	Well suited	Severe Too sandy Somewhat excessively drained
53C:		
Bloomfield	Well suited	Severe Too sandy Somewhat excessively drained
53D:		
Bloomfield	Well suited	Severe Too sandy Somewhat excessively drained
75B:		
Drury	Well suited	Slight
87A:		
Dickinson	Well suited	Slight
87B:		
Dickinson	Well suited	Slight
109A:		
Racoon	Well suited	Slight
131A:		
Alvin	Well suited	Slight
131B:		
Alvin	Well suited	Slight
131C:		
Alvin	Well suited	Slight
131F:		
Alvin	Poorly suited Slope	Slight
142A:		
Patton	Well suited	Slight
142A+:		
Patton, overwash	Well suited	Slight
164A:		
Stoy	Well suited	Slight
164B:		
Stoy	Well suited	Slight

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Suitability for mechanized site preparation	Limitations affecting prescribed burning
	Rating class and limiting features	Rating class and limiting features
165A:		
Weir	Well suited	Slight
173A:		
McGary	Well suited	Slight
173B2:		
McGary, eroded	Well suited	Slight
176A:		
Marissa	Well suited	Slight
178A:		
Ruark	Well suited	Slight
184A:		
Roby	Well suited	Slight
208A:		
Sexton	Well suited	Slight
214B:		
Hosmer	Well suited	Moderate Restrictive layer
214B2:		
Hosmer, eroded	Well suited	Moderate Restrictive layer
214C2:		
Hosmer, eroded	Well suited	Moderate Restrictive layer
214C3:		
Hosmer, severely eroded	Well suited	Moderate Restrictive layer
231A:		
Evansville	Well suited	Slight
301B:		
Grantsburg	Well suited	Slight
308B:		
Alford	Well suited	Slight
308B2:		
Alford, eroded	Well suited	Slight
308C2:		
Alford, eroded	Well suited	Slight
308C3:		
Alford, severely eroded	Well suited	Slight
308D2:		
Alford, eroded	Well suited	Slight

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Suitability for mechanized site preparation: Rating class and limiting features	Limitations affecting prescribed burning: Rating class and limiting features
308D3:		
Alford, severely eroded	Well suited	Slight
337A:		
Creal	Well suited	Slight
339F:		
Wellston	Poorly suited Slope	Slight
340C2:		
Zanesville, eroded	Well suited	Moderate Restrictive layer
340C3:		
Zanesville, severely eroded	Well suited	Moderate Restrictive layer
340D2:		
Zanesville, eroded	Well suited	Moderate Restrictive layer
340D3:		
Zanesville, severely eroded	Well suited	Moderate Restrictive layer
434A:		
Ridgway	Well suited	Slight
434B:		
Ridgway	Well suited	Slight
434C2:		
Ridgway, eroded	Well suited	Slight
436A:		
Meadowbank	Well suited	Slight
436B:		
Meadowbank	Well suited	Slight
445A:		
Newhaven	Well suited	Slight
446A:		
Springerton	Well suited	Slight
453B:		
Muren	Well suited	Slight
467B2:		
Markland, eroded	Well suited	Slight
467C2:		
Markland, eroded	Well suited	Slight

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Suitability for mechanized site preparation	Limitations affecting prescribed burning
	Rating class and limiting features	Rating class and limiting features
467C3:		
Markland, severely eroded	Well suited	Slight
482B:		
Uniontown	Well suited	Slight
482B2:		
Uniontown, eroded	Well suited	Slight
482C2:		
Uniontown, eroded	Well suited	Slight
482C3:		
Uniontown, severely eroded	Well suited	Slight
483A:		
Henshaw	Well suited	Slight
484A:		
Harco	Well suited	Slight
585F:		
Negley	Poorly suited Slope	Slight
630C3:		
Navlys, severely eroded	Well suited	Slight
630D3:		
Navlys, severely eroded	Poorly suited Slope	Slight
750A:		
Skelton	Well suited	Slight
750B:		
Skelton	Well suited	Slight
750C2:		
Skelton, eroded	Well suited	Slight
751A:		
Crawleyville	Well suited	Slight
784F:		
Berks	Unsuited Restrictive layer Slope	Moderate Restrictive layer
802B:		
Orthents, loamy	Well suited	Slight
865:		
Pits, gravel	Not rated	Not rated

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Suitability for mechanized site preparation	Limitations affecting prescribed burning
	Rating class and limiting features	Rating class and limiting features
898G:		
Sylvan	Unsuited Slope	Moderate Slope
Hickory	Unsuited Slope	Moderate Slope
908G:		
Kell	Unsuited Slope	Moderate Slope Restrictive layer
Hickory	Unsuited Slope	Moderate Slope
929D3:		
Hickory, severely eroded	Well suited	Slight
Ava, severely eroded	Well suited	Moderate Restrictive layer
1288A:		
Petrolia, undrained, frequently flooded	Unsuited Wetness	Slight
3092A:		
Sarpy, frequently flooded	Well suited	Severe Excessively drained
3103L:		
Houghton, frequently flooded	Well suited	Slight
3108A:		
Bonnie, frequently flooded	Well suited	Slight
3142A:		
Patton, frequently flooded	Well suited	Slight
3178A:		
Ruark, frequently flooded	Well suited	Slight
3231A:		
Evansville, frequently flooded	Well suited	Slight
3302A:		
Ambraw, frequently flooded	Well suited	Slight
3304A:		
Landes, frequently flooded	Well suited	Slight

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Suitability for mechanized site preparation	Limitations affecting prescribed burning
	Rating class and limiting features	Rating class and limiting features
3331A:		
Haymond, frequently flooded	Well suited	Slight
3333A:		
Wakeland, frequently flooded	Well suited	Slight
3382A:		
Belknap, frequently flooded	Well suited	Slight
3420A:		
Piopolis, frequently flooded	Well suited	Slight
3465A:		
Montgomery, frequently flooded	Well suited	Slight
3524A:		
Zipp, frequently flooded	Well suited	Slight
3597A:		
Armiesburg, frequently flooded	Well suited	Slight
3601A:		
Nolin, frequently flooded	Well suited	Slight
3602A:		
Newark, frequently flooded	Well suited	Slight
3665A:		
Stonelick, frequently flooded	Well suited	Slight
7087A:		
Dickinson, rarely flooded	Well suited	Slight
7109A:		
Racoon, rarely flooded	Well suited	Slight
7131A:		
Alvin, rarely flooded	Well suited	Slight
7131B:		
Alvin, rarely flooded	Well suited	Slight
7142A:		
Patton, rarely flooded	Well suited	Slight

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Suitability for mechanized site preparation	Limitations affecting prescribed burning
	Rating class and limiting features	Rating class and limiting features
7142A+:		
Patton, rarely flooded, overwash	Well suited	Slight
7173A:		
McGary, rarely flooded	Well suited	Slight
7173B2:		
McGary, rarely flooded	Well suited	Slight
7176A:		
Marissa, rarely flooded	Well suited	Slight
7178A:		
Ruark, rarely flooded	Well suited	Slight
7184A:		
Roby, rarely flooded	Well suited	Slight
7208A:		
Sexton, rarely flooded	Well suited	Slight
7434A:		
Ridgway, rarely flooded	Well suited	Slight
7434B:		
Ridgway, rarely flooded	Well suited	Slight
7436A:		
Meadowbank, rarely flooded	Well suited	Slight
7445A:		
Newhaven, rarely flooded	Well suited	Slight
7446A:		
Springerton, rarely flooded	Well suited	Slight
7462A:		
Sciotoville, rarely flooded	Well suited	Slight
7462B:		
Sciotoville, rarely flooded	Well suited	Slight
7465A:		
Montgomery, rarely flooded	Well suited	Slight

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Suitability for mechanized site preparation	Limitations affecting prescribed burning
	Rating class and limiting features	Rating class and limiting features
7467B2:		
Markland, rarely flooded	Well suited	Slight
7467C2:		
Markland, rarely flooded	Well suited	Slight
7482B:		
Uniontown, rarely flooded	Well suited	Slight
7482C2:		
Uniontown, rarely flooded	Well suited	Slight
7483A:		
Henshaw, rarely flooded	Well suited	Slight
7484A:		
Harco, rarely flooded	Well suited	Slight
7524A:		
Zipp, rarely flooded	Well suited	Slight
7524A+:		
Zipp, rarely flooded, overwash	Well suited	Slight
7750A:		
Skelton, rarely flooded	Well suited	Slight
7750B:		
Skelton, rarely flooded	Well suited	Slight
7750C2:		
Skelton, rarely flooded	Well suited	Slight
7751A:		
Crawleyville, rarely flooded	Well suited	Slight
7787A:		
Banlic, rarely flooded	Well suited	Slight
7812E:		
Typic Hapludalfs, rarely flooded	Poorly suited Slope	Slight

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Suitability for mechanized site preparation	Limitations affecting prescribed burning
	Rating class and limiting features	Rating class and limiting features
8072A:		
Sharon, occasionally flooded	Well suited	Slight
8460A:		
Ginat, occasionally flooded	Well suited	Slight

Table 10c.--Forestland Management

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. See text for definitions of terms used in this table)

Map symbol and soil name	Hazard of erosion on roads and trails Rating class and limiting features	Suitability for roads (natural surface) Rating class and limiting features
2A:		
Cisne	Slight	Poorly suited Wetness Low strength
3A:		
Hoyleton	Slight	Moderately suited Low strength Wetness
3B:		
Hoyleton	Moderate Slope/erodibility	Moderately suited Low strength Wetness
8D2:		
Hickory, eroded	Severe Slope/erodibility	Poorly suited Slope Low strength
8F:		
Hickory	Severe Slope/erodibility	Poorly suited Slope Low strength
12A:		
Wynoose	Slight	Poorly suited Ponding Wetness Low strength
13A:		
Bluford	Slight	Moderately suited Wetness Low strength
13B:		
Bluford	Moderate Slope/erodibility	Moderately suited Wetness Low strength
13B2:		
Bluford, eroded	Moderate Slope/erodibility	Moderately suited Wetness Low strength
14B:		
Ava	Moderate Slope/erodibility	Moderately suited Low strength
14B2:		
Ava, eroded	Moderate Slope/erodibility	Moderately suited Low strength

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Hazard of erosion on roads and trails: Rating class and limiting features	Suitability for roads (natural surface): Rating class and limiting features
14C2:		
Ava, eroded	Moderate Slope/erodibility	Moderately suited Low strength Slope
14C3:		
Ava, severely eroded	Moderate Slope/erodibility	Moderately suited Low strength Slope
15B:		
Parke	Moderate Slope/erodibility	Moderately suited Low strength
15C2:		
Parke, eroded	Moderate Slope/erodibility	Moderately suited Low strength Slope Landslides
15D2:		
Parke, eroded	Severe Slope/erodibility	Poorly suited Slope Low strength Landslides
19F:		
Sylvan	Severe Slope/erodibility	Poorly suited Slope Low strength
53B:		
Bloomfield	Slight	Moderately suited Sandiness
53C:		
Bloomfield	Moderate Slope/erodibility	Moderately suited Sandiness Slope
53D:		
Bloomfield	Moderate Slope/erodibility	Poorly suited Slope Sandiness
75B:		
Drury	Moderate Slope/erodibility	Moderately suited Low strength
87A:		
Dickinson	Slight	Well suited
87B:		
Dickinson	Slight	Well suited
109A:		
Racoon	Slight	Poorly suited Ponding Wetness Low strength

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Hazard of erosion on roads and trails	Suitability for roads (natural surface)
	Rating class and limiting features	Rating class and limiting features
131A:		
Alvin	Slight	Well suited
131B:		
Alvin	Moderate Slope/erodibility	Well suited
131C:		
Alvin	Moderate Slope/erodibility	Moderately suited Slope
131F:		
Alvin	Severe Slope/erodibility	Poorly suited Slope
142A:		
Patton	Slight	Poorly suited Ponding Wetness Low strength
142A+:		
Patton, overwash	Slight	Poorly suited Ponding Wetness Low strength
164A:		
Stoy	Slight	Moderately suited Low strength
164B:		
Stoy	Moderate Slope/erodibility	Moderately suited Low strength
165A:		
Weir	Slight	Poorly suited Ponding Wetness Low strength
173A:		
McGary	Slight	Moderately suited Low strength
173B2:		
McGary, eroded	Moderate Slope/erodibility	Moderately suited Low strength
176A:		
Marissa	Slight	Moderately suited Low strength
178A:		
Ruark	Slight	Poorly suited Ponding Wetness Low strength

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Hazard of erosion on roads and trails: Rating class and limiting features	Suitability for roads (natural surface): Rating class and limiting features
184A:		
Roby	Slight	Well suited
208A:		
Sexton	Slight	Poorly suited Ponding Wetness Low strength
214B:		
Hosmer	Moderate Slope/erodibility	Moderately suited Low strength
214B2:		
Hosmer, eroded	Moderate Slope/erodibility	Moderately suited Low strength
214C2:		
Hosmer, eroded	Moderate Slope/erodibility	Moderately suited Low strength Slope
214C3:		
Hosmer, severely eroded	Moderate Slope/erodibility	Moderately suited Low strength Slope
231A:		
Evansville	Slight	Poorly suited Ponding Wetness Low strength
301B:		
Grantsburg	Moderate Slope/erodibility	Moderately suited Low strength
308B:		
Alford	Moderate Slope/erodibility	Moderately suited Low strength
308B2:		
Alford, eroded	Moderate Slope/erodibility	Moderately suited Low strength
308C2:		
Alford, eroded	Moderate Slope/erodibility	Moderately suited Low strength Slope
308C3:		
Alford, severely eroded	Moderate Slope/erodibility	Moderately suited Low strength Slope

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Hazard of erosion on roads and trails	Suitability for roads (natural surface)
	Rating class and limiting features	Rating class and limiting features
308D2:		
Alford, eroded	Severe Slope/erodibility	Poorly suited Slope Low strength
308D3:		
Alford, severely eroded	Severe Slope/erodibility	Poorly suited Slope Low strength
337A:		
Creal	Slight	Moderately suited Low strength Wetness
339F:		
Wellston	Severe Slope/erodibility	Poorly suited Slope Low strength
340C2:		
Zanesville, eroded	Moderate Slope/erodibility	Moderately suited Low strength Slope
340C3:		
Zanesville, severely eroded	Moderate Slope/erodibility	Moderately suited Low strength Slope
340D2:		
Zanesville, eroded	Severe Slope/erodibility	Poorly suited Slope Low strength
340D3:		
Zanesville, severely eroded	Severe Slope/erodibility	Poorly suited Slope Low strength
434A:		
Ridgway	Slight	Moderately suited Low strength
434B:		
Ridgway	Moderate Slope/erodibility	Moderately suited Low strength
434C2:		
Ridgway, eroded	Moderate Slope/erodibility	Moderately suited Low strength Slope
436A:		
Meadowbank	Slight	Moderately suited Low strength

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Hazard of erosion on roads and trails: Rating class and limiting features	Suitability for roads (natural surface): Rating class and limiting features
436B:		
Meadowbank	Moderate Slope/erodibility	Moderately suited Low strength
445A:		
Newhaven	Slight	Moderately suited Low strength
446A:		
Springerton	Slight	Poorly suited Ponding Wetness Low strength
453B:		
Muren	Moderate Slope/erodibility	Moderately suited Low strength Wetness
467B2:		
Markland, eroded	Moderate Slope/erodibility	Moderately suited Low strength
467C2:		
Markland, eroded	Moderate Slope/erodibility	Moderately suited Low strength Slope Landslides
467C3:		
Markland, severely eroded	Moderate Slope/erodibility	Moderately suited Low strength Slope Landslides
482B:		
Uniontown	Moderate Slope/erodibility	Moderately suited Low strength
482B2:		
Uniontown, eroded	Moderate Slope/erodibility	Moderately suited Low strength
482C2:		
Uniontown, eroded	Moderate Slope/erodibility	Moderately suited Low strength Slope
482C3:		
Uniontown, severely eroded	Moderate Slope/erodibility	Moderately suited Low strength Slope
483A:		
Henshaw	Slight	Moderately suited Low strength Wetness

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Hazard of erosion on roads and trails	Suitability for roads (natural surface)
	Rating class and limiting features	Rating class and limiting features
484A:		
Harco	Slight	Moderately suited Low strength
585F:		
Negley	Severe Slope/erodibility	Poorly suited Slope Landslides Low strength
630C3:		
Navlys, severely eroded	Moderate Slope/erodibility	Moderately suited Low strength Slope
630D3:		
Navlys, severely eroded	Severe Slope/erodibility	Poorly suited Slope Low strength
750A:		
Skelton	Slight	Moderately suited Low strength
750B:		
Skelton	Moderate Slope/erodibility	Moderately suited Low strength
750C2:		
Skelton, eroded	Moderate Slope/erodibility	Moderately suited Low strength Slope
751A:		
Crawleyville	Slight	Poorly suited Wetness
784F:		
Berks	Severe Slope/erodibility	Poorly suited Slope Low strength
802B:		
Orthents, loamy	Moderate Slope/erodibility	Moderately suited Low strength
865:		
Pits, gravel	Not rated	Not rated
898G:		
Sylvan	Severe Slope/erodibility	Poorly suited Slope Low strength
Hickory	Severe Slope/erodibility	Poorly suited Slope Low strength

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Hazard of erosion on roads and trails	Suitability for roads (natural surface)
	Rating class and limiting features	Rating class and limiting features
908G:		
Kell	Severe Slope/erodibility	Poorly suited Slope Low strength
Hickory	Severe Slope/erodibility	Poorly suited Slope Low strength
929D3:		
Hickory, severely eroded	Severe Slope/erodibility	Poorly suited Slope Low strength
Ava, severely eroded	Severe Slope/erodibility	Poorly suited Slope Low strength
1288A:		
Petrolia, undrained, frequently flooded	Slight	Poorly suited Ponding Flooding Wetness Low strength
3092A:		
Sarpy, frequently flooded	Slight	Poorly suited Flooding
3103L:		
Houghton, frequently flooded	Slight	Poorly suited Ponding Flooding Low strength Wetness
3108A:		
Bonnie, frequently flooded	Slight	Poorly suited Ponding Flooding Wetness Low strength
3142A:		
Patton, frequently flooded	Slight	Poorly suited Ponding Flooding Wetness Low strength

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Hazard of erosion on roads and trails	Suitability for roads (natural surface)
	Rating class and limiting features	Rating class and limiting features
3178A:		
Ruark, frequently flooded	Slight	Poorly suited Ponding Flooding Wetness Low strength
3231A:		
Evansville, frequently flooded	Slight	Poorly suited Ponding Flooding Wetness Low strength
3302A:		
Ambraw, frequently flooded	Slight	Poorly suited Ponding Flooding Wetness Low strength
3304A:		
Landes, frequently flooded	Slight	Poorly suited Flooding Low strength
3331A:		
Haymond, frequently flooded	Slight	Poorly suited Flooding Low strength
3333A:		
Wakeland, frequently flooded	Slight	Poorly suited Flooding Wetness Low strength
3382A:		
Belknap, frequently flooded	Slight	Poorly suited Flooding Wetness Low strength
3420A:		
Piopolis, frequently flooded	Slight	Poorly suited Ponding Flooding Wetness Low strength

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Hazard of erosion on roads and trails	Suitability for roads (natural surface)
	Rating class and limiting features	Rating class and limiting features
3465A:		
Montgomery, frequently flooded	Slight	Poorly suited Ponding Flooding Wetness Low strength Stickiness; high plasticity index
3524A:		
Zipp, frequently flooded	Slight	Poorly suited Ponding Flooding Wetness Low strength
3597A:		
Armiesburg, frequently flooded	Slight	Poorly suited Flooding Low strength
3601A:		
Nolin, frequently flooded	Slight	Poorly suited Flooding Low strength
3602A:		
Newark, frequently flooded	Slight	Poorly suited Flooding Wetness Low strength
3665A:		
Stonelick, frequently flooded	Slight	Poorly suited Flooding Low strength
7087A:		
Dickinson, rarely flooded	Slight	Poorly suited Flooding Low strength
7109A:		
Racoon, rarely flooded	Slight	Poorly suited Ponding Wetness Low strength
7131A:		
Alvin, rarely flooded	Slight	Well suited

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Hazard of erosion on roads and trails	Suitability for roads (natural surface)
	Rating class and limiting features	Rating class and limiting features
7131B:		
Alvin, rarely flooded	Moderate Slope/erodibility	Well suited
7142A:		
Patton, rarely flooded	Slight	Poorly suited Ponding Wetness Low strength
7142A+:		
Patton, rarely flooded, overwash	Slight	Poorly suited Ponding Wetness Low strength
7173A:		
McGary, rarely flooded	Slight	Moderately suited Low strength
7173B2:		
McGary, rarely flooded	Moderate Slope/erodibility	Moderately suited Low strength
7176A:		
Marissa, rarely flooded	Slight	Moderately suited Low strength
7178A:		
Ruark, rarely flooded	Slight	Poorly suited Ponding Wetness Low strength
7184A:		
Roby, rarely flooded	Slight	Well suited
7208A:		
Sexton, rarely flooded	Slight	Poorly suited Ponding Wetness Low strength
7434A:		
Ridgway, rarely flooded	Slight	Moderately suited Low strength
7434B:		
Ridgway, rarely flooded	Moderate Slope/erodibility	Moderately suited Low strength

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Hazard of erosion on roads and trails	Suitability for roads (natural surface)
	Rating class and limiting features	Rating class and limiting features
7436A:		
Meadowbank, rarely flooded	Slight	Moderately suited Low strength
7445A:		
Newhaven, rarely flooded	Slight	Moderately suited Low strength
7446A:		
Springerton, rarely flooded	Slight	Poorly suited Ponding Wetness Low strength
7462A:		
Sciotoville, rarely flooded	Slight	Moderately suited Low strength
7462B:		
Sciotoville, rarely flooded	Moderate Slope/erodibility	Moderately suited Low strength
7465A:		
Montgomery, rarely flooded	Slight	Poorly suited Ponding Wetness Low strength Stickiness; high plasticity index
7467B2:		
Markland, rarely flooded	Moderate Slope/erodibility	Moderately suited Low strength
7467C2:		
Markland, rarely flooded	Moderate Slope/erodibility	Moderately suited Low strength Slope Landslides
7482B:		
Uniontown, rarely flooded	Moderate Slope/erodibility	Moderately suited Low strength
7482C2:		
Uniontown, rarely flooded	Moderate Slope/erodibility	Moderately suited Low strength Slope

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Hazard of erosion on roads and trails: Rating class and limiting features	Suitability for roads (natural surface): Rating class and limiting features
7483A:		
Henshaw, rarely flooded	Slight	Moderately suited Wetness Low strength
7484A:		
Harco, rarely flooded	Slight	Moderately suited Low strength Wetness
7524A:		
Zipp, rarely flooded	Slight	Poorly suited Ponding Wetness Low strength
7524A+:		
Zipp, rarely flooded, overwash	Slight	Poorly suited Ponding Wetness Low strength
7750A:		
Skelton, rarely flooded	Slight	Moderately suited Low strength
7750B:		
Skelton, rarely flooded	Moderate Slope/erodibility	Moderately suited Low strength
7750C2:		
Skelton, rarely flooded	Moderate Slope/erodibility	Moderately suited Low strength Slope
7751A:		
Crawleyville, rarely flooded	Slight	Poorly suited Wetness
7787A:		
Banlic, rarely flooded	Slight	Moderately suited Wetness Low strength
7812E:		
Typic Hapludalfs, rarely flooded	Severe Slope/erodibility	Poorly suited Slope Low strength

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Hazard of erosion on roads and trails	Suitability for roads (natural surface)
	Rating class and limiting features	Rating class and limiting features
8072A:		
Sharon, occasionally flooded	Slight	Moderately suited Flooding Low strength
8460A:		
Ginat, occasionally flooded	Slight	Poorly suited Ponding Flooding Wetness Low strength

Table 11.--Forestland Productivity

(Only the soils commonly used for production of commercial trees are listed)

Map symbol and soil name	Potential productivity		Suggested trees to plant
	Common trees	Site index	
2A:			
Cisne	Eastern cottonwood	96	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, swamp white oak, sweetgum.
	Pin oak	87	
	Yellow poplar	84	
3A:			
Hoyleton	Eastern cottonwood	102	Bur oak, cherrybark oak, common persimmon, hickory, pin oak, white oak.
	Northern red oak	74	
	Pin oak	92	
	White oak	78	
	Yellow poplar	88	
3B:			
Hoyleton	Eastern cottonwood	101	Bur oak, cherrybark oak, common persimmon, hickory, pin oak, white oak.
	Northern red oak	73	
	Pin oak	91	
	White oak	77	
	Yellow poplar	87	
8D2:			
Hickory, eroded	Northern red oak	65	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	70	
8F:			
Hickory	Northern red oak	65	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	69	
12A:			
Wynoose	Eastern cottonwood	98	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, swamp white oak, sweetgum.
	Pin oak	89	
13A:			
Bluford	Eastern cottonwood	103	Bur oak, cherrybark oak, common persimmon, eastern cottonwood, pin oak, post oak, yellow poplar.
	Northern red oak	72	
	Pin oak	93	
	White oak	73	
	Yellow poplar	96	
13B:			
Bluford	Eastern cottonwood	102	Bur oak, cherrybark oak, common persimmon, eastern cottonwood, pin oak, post oak, yellow poplar.
	Northern red oak	71	
	Pin oak	92	
	White oak	72	
	Yellow poplar	95	
13B2:			
Bluford, eroded	Eastern cottonwood	96	Bur oak, cherrybark oak, common persimmon, eastern cottonwood, pin oak, yellow poplar.
	Northern red oak	67	
	Pin oak	88	
	White oak	68	
	Yellow poplar	89	

Table 11.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Potential productivity: Site index	Suggested trees to plant
14B:			
Ava	Northern red oak	71	Black oak, chinkapin oak, hickory, northern red oak, white oak.
	White oak	70	
	Yellow poplar	90	
14B2:			
Ava, eroded	Northern red oak	68	Black oak, chinkapin oak, hickory, northern red oak, white oak.
	White oak	66	
	Yellow poplar	85	
14C2:			
Ava, eroded	Northern red oak	63	Black oak, chinkapin oak, hickory, northern red oak, white oak.
	White oak	62	
	Yellow poplar	81	
14C3:			
Ava, severely eroded	Northern red oak	61	Black oak, chinkapin oak, hickory, northern red oak, white oak.
	White oak	60	
	Yellow poplar	77	
15B:			
Parke	Northern red oak	78	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	76	
	Yellow poplar	95	
15C2:			
Parke, eroded	Northern red oak	73	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	71	
	Yellow poplar	88	
15D2:			
Parke, eroded	Northern red oak	69	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	67	
	Yellow poplar	71	
19F:			
Sylvan	Northern red oak	60	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	59	
53B:			
Bloomfield	Northern red oak	67	Black oak, blackjack oak, chinkapin oak, eastern redcedar, northern red oak, post oak, white oak.
	White oak	70	
53C:			
Bloomfield	Northern red oak	65	Black oak, blackjack oak, chinkapin oak, eastern redcedar, northern red oak, post oak, white oak.
	White oak	68	
53D:			
Bloomfield	Northern red oak	63	Black oak, blackjack oak, chinkapin oak, eastern redcedar, northern red oak, post oak, white oak.
	White oak	61	
75B:			
Drury	White oak	72	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	Northern red oak	79	

Table 11.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Potential productivity: Site index	Suggested trees to plant
87A:			
Dickinson	White oak	65	Black oak, blackjack oak, bur oak, northern red oak, post oak, white oak.
	Northern red oak	64	
87B:			
Dickinson	White oak	65	Black oak, blackjack oak, bur oak, northern red oak, post oak, white oak.
	Northern red oak	64	
109A:			
Racoon	Cottonwood	103	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, swamp white oak, sweetgum.
	Pin oak	93	
131A:			
Alvin	White oak	80	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	Northern red oak	82	
131B:			
Alvin	White oak	78	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	Northern red oak	80	
131C:			
Alvin	White oak	77	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	Northern red oak	79	
131F:			
Alvin	White oak	51	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	Northern red oak	52	
142A:			
Patton	Eastern cottonwood	95	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, swamp white oak, sweetgum.
	Pin oak	86	
142A+:			
Patton, overwash	Eastern cottonwood	95	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, swamp white oak, sweetgum.
	Pin oak	86	
164A:			
Stoy	Eastern cottonwood	110	Bur oak, cherrybark oak, common persimmon, eastern cottonwood, hickory, pin oak, white oak, yellow poplar.
	Northern red oak	71	
	Pin oak	85	
	White oak	70	
	Yellow poplar	90	
164B:			
Stoy	Eastern cottonwood	109	Bur oak, cherrybark oak, common persimmon, eastern cottonwood, hickory, pin oak, white oak, yellow poplar.
	Northern red oak	70	
	Pin oak	84	
	White oak	69	
	Yellow poplar	89	

Table 11.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Potential productivity: Site index	Suggested trees to plant
165A:			
Weir	Eastern cottonwood	98	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, swamp white oak, sweetgum.
	Pin oak	88	
173A:			
McGary	Eastern cottonwood	92	Cherrybark oak, common persimmon, hickory, pin oak, post oak, yellow poplar.
	Northern red oak	74	
	Pin oak	83	
	White oak	72	
173B2:			
McGary, eroded	Eastern cottonwood	84	Cherrybark oak, common persimmon, hickory, pin oak, post oak, yellow poplar.
	Northern red oak	67	
	Pin oak	76	
	White oak	66	
176A:			
Marissa	Eastern cottonwood	99	Bur oak, cherrybark oak, common persimmon, hickory, pin oak, post oak, yellow poplar.
	Northern red oak	76	
	Pin oak	89	
	White oak	75	
178A:			
Ruark	Eastern cottonwood	92	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, swamp white oak, sweetgum.
	Pin oak	84	
184A:			
Roby	Northern red oak	75	Bur oak, cherrybark oak, common persimmon, eastern cottonwood, hickory, pin oak, white oak, yellow poplar.
	Pin oak	83	
	White oak	70	
208A:			
Sexton	Pin oak	80	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, swamp white oak, sweetgum.
	Eastern cottonwood	104	
214B:			
Hosmer	White oak	72	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	Northern red oak	75	
214B2:			
Hosmer, eroded	White oak	71	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	Northern red oak	74	
214C2:			
Hosmer, eroded	White oak	64	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	Northern red oak	67	
214C3:			
Hosmer, severely eroded	Northern red oak	55	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	53	

Table 11.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Potential productivity: Site index	Suggested trees to plant
231A:			
Evansville	Eastern cottonwood	98	Baldcypress, bur oak, overcup oak, pin oak, red maple, shellbark hickory, swamp white oak, sweetgum.
	Pin oak	88	
	Yellow poplar	82	
301B:			
Grantsburg	White oak	70	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	Northern red oak	71	
308B:			
Alford	White oak	77	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	Northern red oak	78	
308B2:			
Alford, eroded	White oak	71	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	Northern red oak	72	
308C2:			
Alford, eroded	White oak	72	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	Northern red oak	73	
308C3:			
Alford, severely eroded	White oak	66	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	Northern red oak	66	
308D2:			
Alford, eroded	White oak	66	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	Northern red oak	67	
308D3:			
Alford, severely eroded	White oak	59	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	Northern red oak	60	
337A:			
Creal	White oak	76	Bur oak, cherrybark oak, common persimmon, eastern cottonwood, hickory, pin oak, red maple, sweetgum, yellow poplar.
	Northern red oak	75	
	Pin oak	91	
	Yellow poplar	89	
339F:			
Wellston	White oak	43	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	Northern red oak	45	
340C2:			
Zanesville, eroded	White oak	64	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	Northern red oak	62	
340C3:			
Zanesville, severely eroded	White oak	53	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	Northern red oak	51	

Table 11.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Potential productivity: Site index	Suggested trees to plant
340D2:			
Zanesville, eroded	White oak	58	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	Northern red oak	57	
340D3:			
Zanesville, severely eroded	White oak	45	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	Northern red oak	43	
434A:			
Ridgway	Northern red oak	77	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	75	
434B:			
Ridgway	Northern red oak	76	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	74	
434C2:			
Ridgway, eroded	Northern red oak	71	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	69	
436A:			
Meadowbank	Eastern cottonwood	110	Black oak, hickory, northern red oak, pecan, southern red oak, white oak.
	Northern red oak	75	
	Pin oak	99	
	White oak	75	
	Yellow poplar	99	
436B:			
Meadowbank	Eastern cottonwood	109	Black oak, hickory, northern red oak, pecan, southern red oak, white oak.
	Northern red oak	74	
	Pin oak	98	
	White oak	74	
	Yellow poplar	98	
445A:			
Newhaven	Northern red oak	68	Bur oak, cherrybark oak, common persimmon, eastern cottonwood, hickory, pin oak, white oak, yellow poplar.
	Pin oak	88	
	White oak	71	
	Yellow poplar	126	
446A:			
Springerton	Eastern cottonwood	96	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, swamp white oak, sweetgum.
	Pin oak	87	
	Yellow poplar	87	
453B:			
Muren	White oak	79	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	Northern red oak	79	
467B2:			
Markland, eroded	Northern red oak	66	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	61	

Table 11.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Potential productivity: Site index	Suggested trees to plant
467C2:			
Markland, eroded	Northern red oak	63	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	59	
467C3:			
Markland, severely eroded	Northern red oak	52	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	48	
482B:			
Uniontown	Northern red oak	80	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	78	
482B2:			
Uniontown, eroded	Northern red oak	77	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	75	
482C2:			
Uniontown, eroded	Northern red oak	75	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	73	
482C3:			
Uniontown, severely eroded	Northern red oak	68	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	66	
483A:			
Henshaw	Eastern cottonwood	104	Bur oak, cherrybark oak, common persimmon, eastern cottonwood, pin oak, sweetgum, tuliptree.
	Northern red oak	68	
	Pin oak	93	
	White oak	64	
	Yellow poplar	86	
484A:			
Harco	Eastern cottonwood	99	Bur oak, cherrybark oak, common persimmon, hickory, pin oak, sweetgum, white oak, yellow poplar.
	Pin oak	89	
	White oak	76	
585F:			
Negley	Northern red oak	61	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	54	
630C3:			
Navlys, severely eroded	Black walnut	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Northern red oak	80	
	Tuliptree	90	
	White oak	80	
630D3:			
Navlys, severely eroded	Black walnut	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Northern red oak	80	
	Tuliptree	90	
	White oak	80	

Table 11.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Potential productivity: Site index	Suggested trees to plant
750A:			
Skelton	Northern red oak	76	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	81	
750B:			
Skelton	Northern red oak	75	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	80	
750C2:			
Skelton, eroded	Northern red oak	70	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	75	
751A:			
Crawleyville	Eastern cottonwood	94	Bur oak, cherrybark oak, common persimmon, hickory, pin oak, post oak, white oak, yellow poplar.
	Northern red oak	75	
	Pin oak	85	
	White oak	74	
784F:			
Berks	White oak	36	Black oak, blackjack oak, chinkapin oak, hickory, northern red oak, post oak, southern red oak, white oak.
	Northern red oak	38	
802B:			
Orthents, loamy	---	---	Black locust, eastern white pine, hickory, northern red oak, pin oak, white oak.
898G:			
Sylvan	Northern red oak	80	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	80	
	Yellow poplar	90	
Hickory	Northern red oak	39	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	40	
908G:			
Kell	Northern red oak	35	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	33	
Hickory	Northern red oak	39	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	40	
929D3:			
Hickory, severely eroded	Northern red oak	61	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	65	
Ava, severely eroded	Northern red oak	45	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	43	

Table 11.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Potential productivity: Site index	Suggested trees to plant
1288A:			
Petrolia, undrained, frequently flooded	Eastern cottonwood	102	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, swamp white oak, sweetgum, water tupelo.
	Pin oak	98	
3092A:			
Sarpy, frequently flooded	Eastern cottonwood	85	Baldcypress, eastern cottonwood, pecan, pin oak, swamp white oak.
	Pin oak	76	
3103L:			
Houghton, frequently flooded	Eastern cottonwood	89	Baldcypress, overcup oak, swamp white oak, water tupelo.
	Pin oak	80	
3108A:			
Bonnie, frequently flooded	Eastern cottonwood	100	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, swamp white oak, sweetgum.
	Pin oak	90	
3142A:			
Patton, frequently flooded	Eastern cottonwood	95	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, swamp white oak, sweetgum.
	Pin oak	86	
3178A:			
Ruark, frequently flooded	Eastern cottonwood	83	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, swamp white oak, sweetgum.
	Pin oak	76	
3231A:			
Evansville, frequently flooded	Eastern cottonwood	88	Baldcypress, hickory, overcup oak, pin oak, red maple, swamp white oak, sweetgum.
	Pin oak	79	
	Yellow poplar	74	
3302A:			
Ambraw, frequently flooded	Eastern cottonwood	100	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, swamp white oak, sweetgum.
	Pin oak	90	
3304A:			
Landes, frequently flooded	Eastern cottonwood	90	Black walnut, cherrybark oak, common persimmon, eastern cottonwood, pecan, pin oak, swamp chestnut oak, swamp white oak.
	Pin oak	81	
3331A:			
Haymond, frequently flooded	Eastern cottonwood	110	Black walnut, cherrybark oak, common persimmon, eastern cottonwood, pecan, shellbark hickory, swamp white oak.
	Pin oak	99	

Table 11.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Potential productivity: Site index	Suggested trees to plant
3333A:			
Wakeland, frequently flooded	Eastern cottonwood	99	Cherrybark oak, common persimmon, eastern cottonwood, pecan, pin oak, red maple, swamp white oak, sweetgum.
	Pin oak	90	
3382A:			
Belknap, frequently flooded	Eastern cottonwood	102	Bur oak, cherrybark oak, eastern cottonwood, pin oak, red maple, shellbark hickory, swamp white oak, sweetgum.
	Pin oak	92	
3420A:			
Piopolis, frequently flooded	Eastern cottonwood	95	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, swamp white oak, sweetgum.
	Pin oak	86	
3465A:			
Montgomery, frequently flooded	Eastern cottonwood	81	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, shellbark hickory, swamp white oak, sweetgum.
	Pin oak	72	
3524A:			
Zipp, frequently flooded	Eastern cottonwood	75	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, shellbark hickory, swamp white oak, sweetgum.
	Pin oak	68	
3597A:			
Armiesburg, frequently flooded	Eastern cottonwood	109	Black walnut, bur oak, cherrybark oak, common persimmon, eastern cottonwood, pecan, pin oak, shellbark hickory, swamp white oak.
	Pin oak	97	
3601A:			
Nolin, frequently flooded	Eastern cottonwood	109	Bur oak, cherrybark oak, hickory, pecan, swamp chestnut oak, swamp white oak, sweetgum.
	Pin oak	98	
3602A:			
Newark, frequently flooded	Eastern cottonwood	87	Bur oak, cherrybark oak, eastern cottonwood, pin oak, red maple, swamp white oak, sweetgum.
	Pin oak	78	
3665A:			
Stonelick, frequently flooded	Eastern cottonwood	92	Black walnut, cherrybark oak, common persimmon, eastern cottonwood, pecan, pin oak, shagbark hickory, swamp chestnut oak, swamp white oak.
	Pin oak	83	

Table 11.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Potential productivity: Site index	Suggested trees to plant
7087A:			
Dickinson, rarely flooded	White oak	65	Black oak, blackjack oak, northern red oak, post oak, white oak.
	Northern red oak	64	
	Eastern cottonwood	96	
	Pin oak	86	
7109A:			
Racoon, rarely flooded	Cottonwood	103	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, swamp white oak, sweetgum.
	Pin oak	93	
7131A:			
Alvin, rarely flooded	White oak	80	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	Northern red oak	82	
7131B:			
Alvin, rarely flooded	White oak	78	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	Northern red oak	80	
7142A:			
Patton, rarely flooded	Eastern cottonwood	95	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, swamp white oak, sweetgum.
	Pin oak	86	
7142A+:			
Patton, rarely flooded, overwash	Eastern cottonwood	95	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, swamp white oak, sweetgum.
	Pin oak	86	
7173A:			
McGary, rarely flooded	Northern red oak	74	Cherrybark oak, common persimmon, hickory, pin oak, post oak, yellow poplar.
	Pin oak	83	
	White oak	72	
7173B2:			
McGary, rarely flooded	Northern red oak	67	Cherrybark oak, common persimmon, hickory, pin oak, post oak, yellow poplar.
	Pin oak	76	
	White oak	66	
7176A:			
Marissa, rarely flooded	Eastern cottonwood	99	Cherrybark oak, common persimmon, hickory, pin oak, post oak, yellow poplar.
	Northern red oak	76	
	Pin oak	89	
	White oak	75	
7178A:			
Ruark, rarely flooded	Eastern cottonwood	92	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, swamp white oak, sweetgum.
	Pin oak	84	
7184A:			
Roby, rarely flooded	Eastern cottonwood	102	Cherrybark oak, common persimmon, eastern cottonwood, hickory, pin oak, white oak, yellow poplar.
	Pin oak	92	

Table 11.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Potential productivity: Site index	Suggested trees to plant
7208A:			
Sexton, rarely flooded	Pin oak	80	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, swamp white oak, sweetgum.
	Eastern cottonwood	104	
7434A:			
Ridgway, rarely flooded	Northern red oak	77	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	75	
7434B:			
Ridgway, rarely flooded	Northern red oak	76	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	74	
7436A:			
Meadowbank, rarely flooded	Eastern cottonwood	110	Black oak, black walnut, hickory, northern red oak, pecan, southern red oak, white oak.
	Northern red oak	75	
	White oak	75	
	Yellow poplar	99	
7445A:			
Newhaven, rarely flooded	Northern red oak	68	Bur oak, cherrybark oak, common persimmon, eastern cottonwood, hickory, pin oak, white oak, yellow poplar.
	Pin oak	88	
	White oak	71	
	Yellow poplar	126	
7446A:			
Springerton, rarely flooded	Eastern cottonwood	96	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, swamp white oak, sweetgum.
	Pin oak	87	
	Yellow poplar	87	
7462A:			
Sciotoville, rarely flooded	White oak	79	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	Northern red oak	74	
7462B:			
Sciotoville, rarely flooded	White oak	78	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	Northern red oak	73	
7465A:			
Montgomery, rarely flooded	Eastern cottonwood	81	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, swamp white oak, sweetgum.
	Pin oak	72	
7467B2:			
Markland, rarely flooded	Northern red oak	66	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	61	
7467C2:			
Markland, rarely flooded	Northern red oak	63	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	59	

Table 11.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Potential productivity: Site index	Suggested trees to plant
7482B:			
Uniontown, rarely flooded	Northern red oak	80	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	78	
7482C2:			
Uniontown, rarely flooded	Northern red oak	75	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	73	
7483A:			
Henshaw, rarely flooded	Eastern cottonwood	104	Bur oak, cherrybark oak, common persimmon, eastern cottonwood, pin oak, sweetgum, yellow poplar.
	Northern red oak	68	
	Pin oak	93	
	White oak	64	
	Yellow poplar	86	
7484A:			
Harco, rarely flooded	Eastern cottonwood	99	Bur oak, cherrybark oak, common persimmon, hickory, pin oak, sweetgum, white oak, yellow poplar.
	Pin oak	89	
	White oak	76	
7524A:			
Zipp, rarely flooded	Pin oak	75	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, shellbark hickory, swamp white oak, sweetgum.
	Eastern cottonwood	83	
7524A+:			
Zipp, rarely flooded, overwash	Pin oak	75	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, shellbark hickory, swamp white oak, sweetgum.
	Eastern cottonwood	83	
7750A:			
Skelton, rarely flooded	Northern red oak	76	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	81	
7750B:			
Skelton, rarely flooded	Northern red oak	75	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	80	
7750C2:			
Skelton, rarely flooded	Northern red oak	70	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
	White oak	75	
7751A:			
Crawleyville, rarely flooded	Eastern cottonwood	94	Bur oak, cherrybark oak, common persimmon, hickory, pin oak, red maple, white oak, yellow poplar.
	Northern red oak	75	
	Pin oak	85	
	White oak	74	
7787A:			
Banlic, rarely flooded	Eastern cottonwood	93	Bur oak, cherrybark oak, pin oak, red maple, swamp white oak, sweetgum.
	Pin oak	84	

Table 11.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity		Suggested trees to plant
	Common trees	Site index	
7812E: Typic Hapludalfs, rarely flooded	---	---	Black oak, chinkapin oak, hickory, northern red oak, southern red oak, white oak.
8072A: Sharon, occasionally flooded	Eastern cottonwood Pin oak	103 93	Black walnut, bur oak, cherrybark oak, common persimmon, hickory, pecan, white oak.
8460A: Ginat, occasionally flooded	Eastern cottonwood Pin oak	94 85	Baldcypress, eastern cottonwood, overcup oak, pin oak, red maple, swamp white oak, sweetgum.

Table 12.--Windbreaks and Environmental Plantings

(Absence of an entry indicates that trees generally do not grow to the given heigh

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
2A:				
Cisne	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp wh oak, sweetgum
3A:				
Hoyleton	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, commo hackberry, red maple, swamp wh oak, sweetgum
3B:				
Hoyleton	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, commo hackberry, red maple, swamp wh oak, sweetgum

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--			
	<8	8-15	16-25	26-35
8D2:				
Hickory, eroded	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norw spruce, black walnut, blackgum common hackberry northern red oak pin oak, tuliptr
8F:				
Hickory	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norw spruce, black walnut, blackgum common hackberry northern red oak pin oak, tuliptr
12A:				
Wynoose	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp whi oak, sweetgum
13A:				
Bluford	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp whi oak, sweetgum

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
13B:				
Bluford	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, commo hackberry, red maple, swamp wh oak, sweetgum
13B2:				
Bluford, eroded	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, commo hackberry, red maple, swamp wh oak, sweetgum
14B:				
Ava	American cranberrybush, American hazelnut, Canada yew, black chokeberry, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, gray dogwood, mapleleaf viburnum, northern spicebush, redosier dogwood, silky dogwood	American plum, Washington hawthorn, blackhaw, cockspur hawthorn, common chokecherry, common pawpaw, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, staghorn sumac, witchhazel	Austrian pine, Douglas fir, Virginia pine, arborvitae, black oak, blackgum, blue spruce, bur oak, chinkapin oak, common hackberry, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, commo hackberry, red maple, swamp wh oak, sweetgum

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
14B2:				
Ava, eroded	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, commo hackberry, red maple, swamp wh oak, sweetgum
14C2:				
Ava, eroded	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, commo hackberry, red maple, swamp wh oak, sweetgum
14C3:				
Ava, severely eroded	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, commo hackberry, red maple, swamp wh oak, sweetgum
15B:				
Parke	American elder, black chokeberry, common juniper, coralberry, gray dogwood, highbush cranberry, ninebark, northern spicebush, redosier dogwood, silky dogwood	Arrowwood, blackhaw, hazelnut, nannyberry, roughleaf dogwood, shining sumac, smooth sumac, staghorn sumac, wild sweet crab, witchhazel	American plum, Washington hawthorn, common persimmon, eastern redcedar, hackberry, northern white-cedar, prairie crabapple, serviceberry	Norway spruce, baldcypress, bl cherry, black walnut, blackgu cherrybark oak, northern red oa pecan, pin oak, white oak

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
15C2:				
Parke, eroded	American elder, black chokeberry, common juniper, coralberry, gray dogwood, highbush cranberry, ninebark, northern spicebush, redosier dogwood, silky dogwood	Arrowwood, blackhaw, hazelnut, nannyberry, roughleaf dogwood, shining sumac, smooth sumac, staghorn sumac, wild sweet crab, witchhazel	American plum, Washington hawthorn, common persimmon, eastern redcedar, hackberry, northern white-cedar, prairie crabapple, serviceberry	Norway spruce, baldcypress, bl cherry, black walnut, blackgu cherrybark oak, northern red oa pecan, pin oak, white oak
15D2:				
Parke, eroded	American elder, black chokeberry, common juniper, coralberry, gray dogwood, highbush cranberry, ninebark, northern spicebush, redosier dogwood, silky dogwood	Arrowwood, blackhaw, hazelnut, nannyberry, roughleaf dogwood, shining sumac, smooth sumac, staghorn sumac, wild sweet crab, witchhazel	American plum, Washington hawthorn, common persimmon, eastern redcedar, hackberry, northern white-cedar, prairie crabapple, serviceberry	Norway spruce, baldcypress, bl cherry, black walnut, blackgu cherrybark oak, northern red oa pecan, pin oak, white oak
19F:				
Sylvan	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Nor spruce, black walnut, blackgu common hackberr northern red oa pin oak, tulipt

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
53B:				
Bloomfield	American hazelnut, common elderberry, common winterberry, coralberry, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, alternateleaf dogwood, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, southern arrowwood, staghorn sumac	Washington hawthorn, blue spruce, common hackberry, eastern redcedar, red maple	Carolina poplar-
53C:				
Bloomfield	American hazelnut, common elderberry, common winterberry, coralberry, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, alternateleaf dogwood, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, southern arrowwood, staghorn sumac	Washington hawthorn, blue spruce, common hackberry, eastern redcedar, red maple	Carolina poplar-
53D:				
Bloomfield	American hazelnut, common elderberry, common winterberry, coralberry, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, alternateleaf dogwood, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, southern arrowwood, staghorn sumac	Washington hawthorn, blue spruce, common hackberry, eastern redcedar, red maple	Carolina poplar-

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
75B:				
Drury	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Nor spruce, black walnut, blackgu common hackberr northern red oa pin oak, tulipt
87A:				
Dickinson	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar-
87B:				
Dickinson	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar-
109A:				
Racoon	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp wh oak, sweetgum

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of			
	<8	8-15	16-25	26-35
131A:				
Alvin	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, pecan	Norway spruce, common hackberry pin oak, tuliptr
131B:				
Alvin	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, pecan	Norway spruce, common hackberry pin oak, tuliptr
131C:				
Alvin	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, pecan	Norway spruce, common hackberry pin oak, tuliptr
131F:				
Alvin	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, pecan	Norway spruce, common hackberry pin oak, tuliptr

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
142A:				
Patton	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp wh oak, sweetgum
142A+:				
Patton, overwash	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp wh oak, sweetgum
164A:				
Stoy	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, commo hackberry, red maple, swamp wh oak, sweetgum

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--			
	<8	8-15	16-25	26-35
164B:				
Stoy	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp whi oak, sweetgum
165A:				
Weir	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp whi oak, sweetgum
173A:				
McGary	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
173B2:				
McGary, eroded	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce---
176A:				
Marissa	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce---
178A:				
Ruark	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp wh oak, sweetgum

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
184A:				
Roby	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, commo hackberry, red maple, swamp wh oak, sweetgum
208A:				
Sexton	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp wh oak, sweetgum
214B:				
Hosmer	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce---

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
214B2:				
Hosmer, eroded----------	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce---
214C2:				
Hosmer, eroded----------	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce---
214C3:				
Hosmer, severely eroded	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce---

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of			
	<8	8-15	16-25	26-35
231A:				
Evansville	American elder, black chokeberry, buttonbush, gray dogwood, highbush cranberry, ninebark, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Green hawthorn, hackberry, northern white-cedar, overcup oak, shingle oak	Norway spruce, baldcypress, blackgum, bur oa pin oak, swamp white oak, sweet
301B:				
Grantsburg	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp whi oak, sweetgum
308B:				
Alford	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norw spruce, black walnut, blackgum common hackberry northern red oak pin oak, tuliptr
308B2:				
Alford, eroded	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norw spruce, black walnut, blackgum common hackberry northern red oak pin oak, tuliptr

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
308C2:				
Alford, eroded----------	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Nor spruce, black walnut, blackgu common hackberr northern red oa pin oak, tulipt
308C3:				
Alford, severely eroded	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Nor spruce, black walnut, blackgu common hackberr northern red oa pin oak, tulipt
308D2:				
Alford, eroded----------	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Nor spruce, black walnut, blackgu common hackberr northern red oa pin oak, tulipt
308D3:				
Alford, severely eroded	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Nor spruce, black walnut, blackgu common hackberr northern red oa pin oak, tulipt

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of			
	<8	8-15	16-25	26-35
337A:				
Creal	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp whi oak, sweetgum
339F:				
Wellston	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norw spruce, black walnut, blackgum common hackberry northern red oak pin oak, tuliptr
340C2:				
Zanesville, eroded	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
340C3:				
Zanesville, severely eroded	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce---
340D2:				
Zanesville, eroded	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce---
340D3:				
Zanesville, severely eroded	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce---

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--			
	<8	8-15	16-25	26-35
434A:				
Ridgway	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norw spruce, black walnut, blackgum common hackberry northern red oak pin oak, tuliptr
434B:				
Ridgway	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norw spruce, black walnut, blackgum common hackberry northern red oak pin oak, tuliptr
434C2:				
Ridgway, eroded	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norw spruce, black walnut, blackgum common hackberry northern red oak pin oak, tuliptr
436A:				
Meadowbank	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norw spruce, black walnut, blackgum common hackberry northern red oak pin oak, tuliptr

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
436B:				
Meadowbank	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Nor spruce, black walnut, blackgu common hackberr northern red oa pin oak, tulipt
445A:				
Newhaven	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, commo hackberry, red maple, swamp wh oak, sweetgum
446A:				
Springerton	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp wh oak, sweetgum

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
453B:				
Muren	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Nor spruce, black walnut, blackgu common hackberr northern red oa pin oak, tulipt
467B2:				
Markland, eroded	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce---
467C2:				
Markland, eroded	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce---

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
467C3: Markland, severely eroded	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce---
482B: Uniontown	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Nor spruce, black walnut, blackgu common hackberr northern red oa pin oak, tulipt
482B2: Uniontown, eroded	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Nor spruce, black walnut, blackgu common hackberr northern red oa pin oak, tulipt
482C2: Uniontown, eroded	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Nor spruce, black walnut, blackgu common hackberr northern red oa pin oak, tulipt

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
482C3: Uniontown, severely eroded	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Nor spruce, black walnut, blackgu common hackberr northern red oa pin oak, tulipt
483A: Henshaw	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, commo hackberry, red maple, swamp wh oak, sweetgum
484A: Harco	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, commo hackberry, red maple, swamp wh oak, sweetgum
585F: Negley	American elder, black chokeberry, common juniper, coralberry, gray dogwood, highbush cranberry, ninebark, northern spicebush, redosier dogwood, silky dogwood	Arrowwood, blackhaw, hazelnut, nannyberry, roughleaf dogwood, shining sumac, smooth sumac, staghorn sumac, wild sweet crab, witchhazel	American plum, Washington hawthorn, common persimmon, eastern redcedar, hackberry, northern white-cedar, prairie crabapple, serviceberry	Norway spruce, baldcypress, bl cherry, black walnut, blackgu cherrybark oak, northern red oa pecan, pin oak, white oak

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
630C3:				
Navlys, severely eroded	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Nor spruce, black walnut, blackgu common hackberr northern red oa pin oak, tulipt
630D3:				
Navlys, severely eroded	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Nor spruce, black walnut, blackgu common hackberr northern red oa pin oak, tulipt
750A:				
Skelton-----------------	American elder, black chokeberry, common juniper, coralberry, gray dogwood, highbush cranberry, ninebark, northern spicebush, redosier dogwood, silky dogwood	Arrowwood, blackhaw, hazelnut, nannyberry, roughleaf dogwood, shining sumac, smooth sumac, staghorn sumac, wild sweet crab, witchhazel	American plum, Washington hawthorn, common persimmon, eastern redcedar, hackberry, northern white-cedar, prairie crabapple, serviceberry	Norway spruce, baldcypress, bl cherry, black walnut, blackgu cherrybark oak, northern red oa pecan, pin oak, white oak
750B:				
Skelton-----------------	American elder, black chokeberry, common juniper, coralberry, gray dogwood, highbush cranberry, ninebark, northern spicebush, redosier dogwood, silky dogwood	Arrowwood, blackhaw, hazelnut, nannyberry, roughleaf dogwood, shining sumac, smooth sumac, staghorn sumac, wild sweet crab, witchhazel	American plum, Washington hawthorn, common persimmon, eastern redcedar, hackberry, northern white-cedar, prairie crabapple, serviceberry	Norway spruce, baldcypress, bl cherry, black walnut, blackgu cherrybark oak, northern red oa pecan, pin oak, white oak

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
750C2:				
Skelton, eroded	American elder, black chokeberry, common juniper, coralberry, gray dogwood, highbush cranberry, ninebark, northern spicebush, redosier dogwood, silky dogwood	Arrowwood, blackhaw, hazelnut, nannyberry, roughleaf dogwood, shining sumac, smooth sumac, staghorn sumac, wild sweet crab, witchhazel	American plum, Washington hawthorn, common persimmon, eastern redcedar, hackberry, northern white-cedar, prairie crabapple, serviceberry	Norway spruce, baldcypress, bl cherry, black walnut, blackgu cherrybark oak, northern red oa pecan, pin oak, white oak
751A:				
Crawleyville	American elder, black chokeberry, highbush cranberry, ninebark, northern spicebush, redosier dogwood, silky dogwood	Arrowwood, blackhaw, cockspur hawthorn, hazel alder, nannyberry, pawpaw, prairie crabapple, roughleaf dogwood, witchhazel	Washington hawthorn, common persimmon, eastern redcedar, hackberry, northern white-cedar, shingle oak	Norway spruce, Shumard's oak, baldcypress, blackgum, bur o cherrybark oak, eastern white p pecan, pin oak, swamp chestnut swamp white oak sweetgum
784F:				
Berks	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	Cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	Bur oak, chinkapin oak, thornless honeylocust	---
802B:				
Orthents, loamy	Common winterberry, coralberry, gray dogwood, mapleleaf arrowwood, redosier dogwood	American plum, blackhaw, hazelnut, prairie crabapple, roughleaf dogwood	Eastern redcedar, nannyberry, shadbush, tamarack, northern white-cedar	Baldcypress, com hackberry, tuliptree, Norw spruce
865.				
Pits, gravel				

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
898G:				
Sylvan	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Nor spruce, black walnut, blackgu common hackberr northern red oa pin oak, tulipt
Hickory	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Nor spruce, black walnut, blackgu common hackberr northern red oa pin oak, tulipt
908G:				
Kell	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar-
Hickory	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Nor spruce, black walnut, blackgu common hackberr northern red oa pin oak, tulipt

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of			
	<8	8-15	16-25	26-35
929D3:				
Hickory, severely eroded	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norw spruce, black walnut, blackgum common hackberry northern red oak pin oak, tuliptr
Ava, severely eroded----	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce----
1288A:				
Petrolia, undrained, frequently flooded-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp whi oak, sweetgum

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
3092A: Sarpy, frequently flooded	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, commo hackberry, red maple, swamp wh oak, sweetgum
3103L: Houghton, frequently flooded	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Common serviceberry, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, common persimmon	Pin oak, river birch, swamp wh oak, sweetgum
3108A: Bonnie, frequently flooded	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp wh oak, sweetgum

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
3142A: Patton, frequently flooded	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp wh oak, sweetgum
3178A: Ruark, frequently flooded	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp wh oak, sweetgum
3231A: Evansville, frequently flooded	American elder, black chokeberry, buttonbush, gray dogwood, highbush cranberry, ninebark, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Green hawthorn, hackberry, northern white-cedar, overcup oak, shingle oak	Norway spruce, baldcypress, blackgum, bur o pin oak, swamp white oak, swee

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
3302A: Ambraw, frequently flooded	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, shingle oak	Red maple, river birch, swamp wh oak, sweetgum
3304A: Landes, frequently flooded	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, commo hackberry, red maple, swamp wh oak, sweetgum
3331A: Haymond, frequently flooded	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Nor spruce, black walnut, blackgu common hackberr northern red oa pin oak, tulipt

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
3333A: Wakeland, frequently flooded	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, commo hackberry, red maple, swamp wh oak, sweetgum
3382A: Belknap, frequently flooded	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, commo hackberry, red maple, swamp wh oak, sweetgum
3420A: Piopolis, frequently flooded	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp wh oak, sweetgum

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
3465A: Montgomery, frequently flooded	American elder, black chokeberry, buttonbush, gray dogwood, highbush cranberry, ninebark, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Green hawthorn, hackberry, northern white-cedar, overcup oak, shingle oak	Norway spruce, baldcypress, blackgum, bur o pin oak, swamp white oak, swee
3524A: Zipp, frequently flooded	American elder, black chokeberry, buttonbush, gray dogwood, highbush cranberry, ninebark, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Green hawthorn, hackberry, northern white-cedar, overcup oak, shingle oak	Norway spruce, baldcypress, blackgum, bur o pin oak, swamp white oak, swee
3597A: Armiesburg, frequently flooded	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Nor spruce, black walnut, blackgu common hackberr northern red oa pin oak, tulipt
3601A: Nolin, frequently flooded	American elder, black chokeberry, highbush cranberry, ninebark, northern spicebush, redosier dogwood, silky dogwood	Arrowwood, hazel alder, prairie crabapple, roughleaf dogwood, wild sweet crab	Washington hawthorn, cockspur hawthorn, hackberry, northern white-cedar, shingle oak	Baldcypress, bla walnut, blackgu bur oak, pin oa swamp white oak sweetgum

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
3602A: Newark, frequently flooded	American elder, black chokeberry, highbush cranberry, ninebark, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, pawpaw, roughleaf dogwood	Washington hawthorn, common persimmon, eastern redcedar, hackberry, northern white-cedar, overcup oak, shingle oak	Shumard's oak, baldcypress, blackgum, cherrybark oak, pecan, pin oak, swamp white oak sweetgum
3665A: Stonelick, frequently flooded	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, commo hackberry, red maple, swamp wh oak, sweetgum
7087A: Dickinson, rarely flooded	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar-

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
7109A:				
Racoon, rarely flooded	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp wh oak, sweetgum
7131A:				
Alvin, rarely flooded	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, pecan	Norway spruce, common hackberr pin oak, tulipt
7131B:				
Alvin, rarely flooded	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, pecan	Norway spruce, common hackberr pin oak, tulipt
7142A:				
Patton, rarely flooded	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp wh oak, sweetgum

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
7142A+: Patton, rarely flooded, overwash	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp wh oak, sweetgum
7173A: McGary, rarely flooded	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce---
7173B2: McGary, rarely flooded	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce---

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
7176A:				
Marissa, rarely flooded	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce---
7178A:				
Ruark, rarely flooded---	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp wh oak, sweetgum
7184A:				
Roby, rarely flooded----	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, commo hackberry, red maple, swamp wh oak, sweetgum

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
7208A:				
Sexton, rarely flooded--	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp wh oak, sweetgum
7434A:				
Ridgway, rarely flooded	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Nor spruce, black walnut, blackgu common hackberr northern red oa pin oak, tulipt
7434B:				
Ridgway, rarely flooded	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Nor spruce, black walnut, blackgu common hackberr northern red oa pin oak, tulipt

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
7436A: Meadowbank, rarely flooded	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Nor spruce, black walnut, blackgu common hackberr northern red oa pin oak, tulipt
7445A: Newhaven, rarely flooded	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, commo hackberry, red maple, swamp wh oak, sweetgum
7446A: Springerton, rarely flooded	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp wh oak, sweetgum

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
7462A: Sciotoville, rarely flooded	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce---
7462B: Sciotoville, rarely flooded	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce---
7465A: Montgomery, rarely flooded	American elder, black chokeberry, buttonbush, gray dogwood, highbush cranberry, ninebark, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Green hawthorn, hackberry, northern white-cedar, overcup oak, shingle oak	Norway spruce, baldcypress, blackgum, bur o pin oak, swamp white oak, swee

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
7467B2:				
Markland, rarely flooded	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce---
7467C2:				
Markland, rarely flooded	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce---
7482B:				
Uniontown, rarely flooded----------------	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Nor spruce, black walnut, blackgu common hackberr northern red oa pin oak, tulipt

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--			
	<8	8-15	16-25	26-35
7482C2: Uniontown, rarely flooded	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norw spruce, black walnut, blackgum common hackberry northern red oak pin oak, tuliptr
7483A: Henshaw, rarely flooded	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp whi oak, sweetgum
7484A: Harco, rarely flooded	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp whi oak, sweetgum
7524A: Zipp, rarely flooded	American elder, black chokeberry, buttonbush, gray dogwood, highbush cranberry, ninebark, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Green hawthorn, hackberry, northern white-cedar, overcup oak, shingle oak	Norway spruce, baldcypress, blackgum, bur oa pin oak, swamp white oak, sweet

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
7524A+: Zipp, rarely flooded, overwash	American elder, black chokeberry, buttonbush, gray dogwood, highbush cranberry, ninebark, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Green hawthorn, hackberry, northern white-cedar, overcup oak, shingle oak	Norway spruce, baldcypress, blackgum, bur o pin oak, swamp white oak, swee
7750A: Skelton, rarely flooded	American elder, black chokeberry, common juniper, coralberry, gray dogwood, highbush cranberry, ninebark, northern spicebush, redosier dogwood, silky dogwood	Arrowwood, blackhaw, hazelnut, nannyberry, roughleaf dogwood, shining sumac, smooth sumac, staghorn sumac, wild sweet crab, witchhazel	American plum, Washington hawthorn, common persimmon, eastern redcedar, hackberry, northern white-cedar, prairie crabapple, serviceberry	Norway spruce, baldcypress, bl cherry, black walnut, blackgu cherrybark oak, northern red oa pecan, pin oak, white oak
7750B: Skelton, rarely flooded	American elder, black chokeberry, common juniper, coralberry, gray dogwood, highbush cranberry, ninebark, northern spicebush, redosier dogwood, silky dogwood	Arrowwood, blackhaw, hazelnut, nannyberry, roughleaf dogwood, shining sumac, smooth sumac, staghorn sumac, wild sweet crab, witchhazel	American plum, Washington hawthorn, common persimmon, eastern redcedar, hackberry, northern white-cedar, prairie crabapple, serviceberry	Norway spruce, baldcypress, bl cherry, black walnut, blackgu cherrybark oak, northern red oa pecan, pin oak, white oak
7750C2: Skelton, rarely flooded	American elder, black chokeberry, common juniper, coralberry, gray dogwood, highbush cranberry, ninebark, northern spicebush, redosier dogwood, silky dogwood	Arrowwood, blackhaw, hazelnut, nannyberry, roughleaf dogwood, shining sumac, smooth sumac, staghorn sumac, wild sweet crab, witchhazel	American plum, Washington hawthorn, common persimmon, eastern redcedar, hackberry, northern white-cedar, prairie crabapple, serviceberry	Norway spruce, baldcypress, bl cherry, black walnut, blackgu cherrybark oak, northern red oa pecan, pin oak, white oak

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
7751A: Crawleyville, rarely flooded	American elder, black chokeberry, highbush cranberry, ninebark, northern spicebush, redosier dogwood, silky dogwood	Arrowwood, blackhaw, cockspur hawthorn, hazel alder, nannyberry, pawpaw, prairie crabapple, roughleaf dogwood, witchhazel	Washington hawthorn, common persimmon, eastern redcedar, hackberry, northern white-cedar, shingle oak	Norway spruce, Shumard's oak, baldcypress, blackgum, bur o cherrybark oak, eastern white p pecan, pin oak, swamp chestnut swamp white oak sweetgum
7787A: Banlic, rarely flooded	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, commo hackberry, red maple, swamp wh oak, sweetgum
7812E: Typic Hapludalfs, rarely flooded	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Nor spruce, black walnut, blackgu common hackberr northern red oa pin oak, tulipt

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, o			
	<8	8-15	16-25	26-35
8072A: Sharon, occasionally flooded	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, commo hackberry, red maple, swamp wh oak, sweetgum
8460A: Ginat, occasionally flooded	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp wh oak, sweetgum

Table 13a.--Recreational Development

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2A:							
Cisne	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
3A:							
Hoyleton	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
		Depth to saturated zone	0.44	Depth to saturated zone	0.22	Depth to saturated zone	0.44
3B:							
Hoyleton	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
		Depth to saturated zone	0.44	Depth to saturated zone	0.22	Depth to saturated zone	0.44
						Slope	0.12
8D2:							
Hickory, eroded	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
8F:							
Hickory	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
12A:							
Wynoose	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
13A:							
Bluford	90	Very limited		Somewhat limited		Very limited	
		Depth to saturated zone	1.00	Slow water movement	0.96	Depth to saturated zone	1.00
		Slow water movement	0.96	Depth to saturated zone	0.94	Slow water movement	0.96
13B:							
Bluford	90	Very limited		Somewhat limited		Very limited	
		Depth to saturated zone	1.00	Slow water movement	0.96	Depth to saturated zone	1.00
		Slow water movement	0.96	Depth to saturated zone	0.94	Slow water movement	0.96
						Slope	0.50

Table 13a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
13B2:							
Bluford, eroded	90	Very limited Depth to saturated zone Slow water movement	 1.00 0.96	Somewhat limited Slow water movement Depth to saturated zone	 0.96 0.94	Very limited Depth to saturated zone Slow water movement Slope	 1.00 0.96 0.50
14B:							
Ava	90	Somewhat limited Slow water movement Depth to cemented pan	 0.21 0.06	Somewhat limited Slow water movement Depth to cemented pan	 0.21 0.06	Somewhat limited Slow water movement Slope Depth to cemented pan	 0.21 0.12 0.06
14B2:							
Ava, eroded	90	Somewhat limited Depth to cemented pan Slow water movement	 0.65 0.21	Somewhat limited Depth to cemented pan Slow water movement	 0.65 0.21	Somewhat limited Depth to cemented pan Slope Slow water movement	 0.64 0.50 0.21
14C2:							
Ava, eroded	90	Somewhat limited Depth to cemented pan Slow water movement Slope	 0.65 0.21 0.01	Somewhat limited Depth to cemented pan Slow water movement Slope	 0.65 0.21 0.01	Very limited Slope Depth to cemented pan Slow water movement	 1.00 0.64 0.21
14C3:							
Ava, severely eroded	90	Somewhat limited Depth to cemented pan Slow water movement Slope	 0.65 0.21 0.01	Somewhat limited Depth to cemented pan Slow water movement Slope	 0.65 0.21 0.01	Very limited Slope Depth to cemented pan Slow water movement	 1.00 0.64 0.21
15B:							
Parke	90	Not limited		Not limited		Somewhat limited Slope	 0.50
15C2:							
Parke, eroded	90	Somewhat limited Slope	 0.01	Somewhat limited Slope	 0.01	Very limited Slope	 1.00
15D2:							
Parke, eroded	90	Somewhat limited Slope	 0.96	Somewhat limited Slope	 0.96	Very limited Slope	 1.00
19F:							
Sylvan	90	Very limited Too steep	 1.00	Very limited Too steep	 1.00	Very limited Slope	 1.00
53B:							
Bloomfield	90	Very limited Too sandy	 1.00	Very limited Too sandy	 1.00	Very limited Too sandy Slope	 1.00 0.12

Table 13a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
53C:							
Bloomfield	90	Very limited		Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00	Too sandy	1.00
		Slope	0.01	Slope	0.01	Slope	1.00
53D:							
Bloomfield	90	Very limited		Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00	Slope	1.00
		Slope	0.96	Slope	0.96	Too sandy	1.00
75B:							
Drury	90	Not limited		Not limited		Somewhat limited	
						Slope	0.50
87A:							
Dickinson	90	Not limited		Not limited		Not limited	
87B:							
Dickinson	90	Not limited		Not limited		Somewhat limited	
						Slope	0.28
109A:							
Racoon	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
131A:							
Alvin	90	Not limited		Not limited		Not limited	
131B:							
Alvin	90	Not limited		Not limited		Somewhat limited	
						Slope	0.50
131C:							
Alvin	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
131F:							
Alvin	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
142A:							
Patton	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
142A+:							
Patton, overwash	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00

Table 13a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
164A:							
Stoy----------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
164B:							
Stoy----------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Slope	0.50
						Depth to saturated zone	0.39
165A:							
Weir----------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
173A:							
McGary--------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.43	Slow water movement	0.43	Slow water movement	0.43
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
173B2:							
McGary, eroded------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.43	Slow water movement	0.43	Slow water movement	0.43
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
						Slope	0.12
176A:							
Marissa-------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
178A:							
Ruark---------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
184A:							
Roby----------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
		Too sandy	0.01	Too sandy	0.01	Too sandy	0.01

Table 13a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
208A:							
Sexton	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
214B:							
Hosmer	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to cemented pan	0.65	Depth to cemented pan	0.65	Depth to cemented pan	0.64
						Slope	0.50
214B2:							
Hosmer, eroded	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to cemented pan	0.86	Depth to cemented pan	0.86	Depth to cemented pan	0.86
						Slope	0.50
214C2:							
Hosmer, eroded	90	Somewhat limited		Somewhat limited		Very limited	
		Depth to cemented pan	0.86	Depth to cemented pan	0.86	Slope	1.00
		Slope	0.01	Slope	0.01	Depth to cemented pan	0.86
214C3:							
Hosmer, severely eroded	90	Somewhat limited		Somewhat limited		Very limited	
		Depth to cemented pan	0.95	Depth to cemented pan	0.95	Slope	1.00
		Slope	0.01	Slope	0.01	Depth to cemented pan	0.95
231A:							
Evansville	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
301B:							
Grantsburg	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.21	Slow water movement	0.21	Slope	0.50
		Depth to cemented pan	0.01	Depth to cemented pan	0.01	Slow water movement	0.21
						Depth to cemented pan	0.01
308B:							
Alford	90	Not limited		Not limited		Somewhat limited	
						Slope	0.50
308B2:							
Alford, eroded	90	Not limited		Not limited		Somewhat limited	
						Slope	0.50
308C2:							
Alford, eroded	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00

Table 13a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
308C3:							
Alford, severely eroded	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
308D2:							
Alford, eroded	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
308D3:							
Alford, severely eroded	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
337A:							
Creal	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.22	Depth to saturated zone	0.44
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
339F:							
Wellston	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
340C2:							
Zanesville, eroded	90	Very limited		Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Slope	0.01	Slope	0.01	Slope	1.00
340C3:							
Zanesville, severely eroded	90	Very limited		Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Slope	0.01	Slope	0.01	Slope	1.00
340D2:							
Zanesville, eroded	90	Very limited		Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00	Slope	1.00
		Slope	0.96	Slope	0.96	Depth to cemented pan	1.00
340D3:							
Zanesville, severely eroded	90	Very limited		Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00	Slope	1.00
		Slope	0.96	Slope	0.96	Depth to cemented pan	1.00
434A:							
Ridgway	90	Not limited		Not limited		Not limited	
434B:							
Ridgway	90	Not limited		Not limited		Somewhat limited	
						Slope	0.28

Table 13a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
434C2:							
Ridgway, eroded	90	Not limited		Not limited		Very limited Slope	 1.00
436A:							
Meadowbank	90	Not limited		Not limited		Not limited	
436B:							
Meadowbank	90	Not limited		Not limited		Somewhat limited Slope	 0.12
445A:							
Newhaven	90	Somewhat limited Depth to saturated zone	 0.39	Somewhat limited Depth to saturated zone	 0.19	Somewhat limited Depth to saturated zone	 0.39
446A:							
Springerton	90	Very limited Depth to saturated zone Ponding	 1.00 1.00	Very limited Depth to saturated zone Ponding	 1.00 1.00	Very limited Depth to saturated zone Ponding	 1.00 1.00
453B:							
Muren	90	Somewhat limited Depth to saturated zone	 0.95	Somewhat limited Depth to saturated zone	 0.68	Somewhat limited Depth to saturated zone Slope	 0.95 0.50
467B2:							
Markland, eroded	90	Somewhat limited Slow water movement	 0.43	Somewhat limited Slow water movement	 0.43	Somewhat limited Slope Slow water movement	 0.50 0.43
467C2:							
Markland, eroded	90	Somewhat limited Slow water movement	 0.43	Somewhat limited Slow water movement	 0.43	Very limited Slope Slow water movement	 1.00 0.43
467C3:							
Markland, severely eroded	90	Somewhat limited Slow water movement Slope	 0.43 0.01	Somewhat limited Slow water movement Slope	 0.43 0.01	Very limited Slope Slow water movement	 1.00 0.43
482B:							
Uniontown	90	Not limited		Not limited		Somewhat limited Slope	 0.12
482B2:							
Uniontown, eroded	90	Not limited		Not limited		Somewhat limited Slope	 0.12
482C2:							
Uniontown, eroded	90	Not limited		Not limited		Very limited Slope	 1.00

Table 13a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
482C3:							
Uniontown, severely eroded	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
483A:							
Henshaw	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
484A:							
Harco	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
585F:							
Negley	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
630C3:							
Navlys, severely eroded	90	Not limited		Not limited		Very limited	
						Slope	1.00
630D3:							
Navlys, severely eroded	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
750A:							
Skelton	90	Not limited		Not limited		Not limited	
750B:							
Skelton	90	Not limited		Not limited		Somewhat limited	
						Slope	0.12
750C2:							
Skelton, eroded	90	Not limited		Not limited		Very limited	
						Slope	1.00
751A:							
Crawleyville	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
784F:							
Berks	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
						Gravel	0.99
						Depth to bedrock	0.42
802B:							
Orthents, loamy	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
						Slope	0.12

Table 13a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
865:							
Pits, gravel	90	Not rated		Not rated		Not rated	
898G:							
Sylvan	45	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
Hickory	40	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
						Gravel	0.01
908G:							
Kell	55	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
						Depth to bedrock	0.10
Hickory	35	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
929D3:							
Hickory, severely eroded	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
Ava, severely eroded	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
		Depth to cemented pan	0.65	Depth to cemented pan	0.65	Depth to cemented pan	0.64
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
1288A:							
Petrolia, undrained, frequently flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Ponding	1.00	Flooding	1.00
		Ponding	1.00	Flooding	0.40	Ponding	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
3092A:							
Sarpy, frequently flooded	90	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
3103L:							
Houghton, frequently flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Organic matter content	1.00	Organic matter content	1.00

Table 13a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
3108A:							
Bonnie, frequently flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Ponding	1.00	Flooding	0.40	Ponding	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
3142A:							
Patton, frequently flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Ponding	1.00	Flooding	1.00
		Ponding	1.00	Flooding	0.40	Ponding	1.00
3178A:							
Ruark, frequently flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Ponding	1.00	Flooding	1.00
		Ponding	1.00	Flooding	0.40	Ponding	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
3231A:							
Evansville, frequently flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Ponding	1.00	Flooding	1.00
		Ponding	1.00	Flooding	0.40	Ponding	1.00
3302A:							
Ambraw, frequently flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Ponding	1.00	Flooding	1.00
		Ponding	1.00	Flooding	0.40	Ponding	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
3304A:							
Landes, frequently flooded	90	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
3331A:							
Haymond, frequently flooded	90	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00

Table 13a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
3333A:							
Wakeland, frequently flooded------------	90	Very limited		Somewhat limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.94	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
3382A:							
Belknap, frequently flooded------------	90	Very limited		Somewhat limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.94	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
3420A:							
Piopolis, frequently flooded------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Ponding	1.00	Slow water movement	0.96	Ponding	1.00
		Slow water movement	0.96	Flooding	0.40	Slow water movement	0.96
3465A:							
Montgomery, frequently flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Ponding	1.00	Flooding	1.00
		Ponding	1.00	Slow water movement	0.96	Ponding	1.00
		Slow water movement	0.96	Flooding	0.40	Slow water movement	0.96
3524A:							
Zipp, frequently flooded------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Too clayey	1.00	Flooding	1.00
		Too clayey	1.00	Ponding	1.00	Too clayey	1.00
		Ponding	1.00	Slow water movement	0.96	Ponding	1.00
		Slow water movement	0.96	Flooding	0.40	Slow water movement	0.96
3597A:							
Armiesburg, frequently flooded	90	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
3601A:							
Nolin, frequently flooded------------	90	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00

Table 13a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
3602A:							
Newark, frequently flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
3665A:							
Stonelick, frequently flooded	90	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
7087A:							
Dickinson, rarely flooded	90	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
7109A:							
Racoon, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Slow water movement	0.96	Slow water movement	0.96
		Slow water movement	0.96				
7131A:							
Alvin, rarely flooded	90	Very limited		Not limited		Not limited	
		Flooding	1.00				
7131B:							
Alvin, rarely flooded	90	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Slope	0.50
7142A:							
Patton, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00				
7142A+:							
Patton, rarely flooded, overwash	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00				

Table 13a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
7173A:							
McGary, rarely flooded	90	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Slow water movement	0.43	Slow water movement	0.43
		Slow water movement	0.43	Depth to saturated zone	0.19	Depth to saturated zone	0.39
		Depth to saturated zone	0.39				
7173B2:							
McGary, rarely flooded	90	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Slow water movement	0.43	Slow water movement	0.43
		Slow water movement	0.43	Depth to saturated zone	0.19	Depth to saturated zone	0.39
		Depth to saturated zone	0.39			Slope	0.12
7176A:							
Marissa, rarely flooded	90	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.19	Depth to saturated zone	0.39
		Depth to saturated zone	0.39				
7178A:							
Ruark, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Slow water movement	0.21	Slow water movement	0.21
		Slow water movement	0.21				
7184A:							
Roby, rarely flooded	90	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.19	Depth to saturated zone	0.39
		Depth to saturated zone	0.39	Too sandy	0.01	Too sandy	0.01
		Too sandy	0.01				
7208A:							
Sexton, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Slow water movement	0.96	Slow water movement	0.96
		Slow water movement	0.96				
7434A:							
Ridgway, rarely flooded	90	Very limited		Not limited		Not limited	
		Flooding	1.00				

Table 13a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
7434B:							
Ridgway, rarely flooded	90	Not limited		Not limited		Somewhat limited	
						Slope	0.28
7436A:							
Meadowbank, rarely flooded	90	Very limited		Not limited		Not limited	
		Flooding	1.00				
7445A:							
Newhaven, rarely flooded	90	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.19	Depth to saturated zone	0.39
		Depth to saturated zone	0.39				
7446A:							
Springerton, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00				
7462A:							
Sciotoville, rarely flooded	95	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Slow water movement	0.43	Slow water movement	0.43
		Slow water movement	0.43	Depth to saturated zone	0.03	Depth to saturated zone	0.07
		Depth to saturated zone	0.07				
7462B:							
Sciotoville, rarely flooded	95	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Slow water movement	0.43	Slope	0.50
		Slow water movement	0.43	Depth to saturated zone	0.03	Slow water movement	0.43
		Depth to saturated zone	0.07			Depth to saturated zone	0.07
7465A:							
Montgomery, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Slow water movement	0.96	Slow water movement	0.96
		Slow water movement	0.96				
7467B2:							
Markland, rarely flooded	90	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Slow water movement	0.43	Slope	0.50
		Slow water movement	0.43			Slow water movement	0.43

Table 13a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
7467C2:							
Markland, rarely flooded	90	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Slow water movement	0.43	Slope	1.00
		Slow water movement	0.43			Slow water movement	0.43
7482B:							
Uniontown, rarely flooded	90	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Slope	0.12
7482C2:							
Uniontown, rarely flooded	90	Very limited		Not limited		Very limited	
		Flooding	1.00			Slope	1.00
7483A:							
Henshaw, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Slow water movement	0.21	Slow water movement	0.21
		Slow water movement	0.21				
7484A:							
Harco, rarely flooded	90	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.78	Depth to saturated zone	0.99
		Depth to saturated zone	0.99				
7524A:							
Zipp, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Too clayey	1.00	Too clayey	1.00
		Too clayey	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Slow water movement	0.96	Slow water movement	0.96
		Slow water movement	0.96				
7524A+:							
Zipp, rarely flooded, overwash	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Slow water movement	0.96	Slow water movement	0.96
		Slow water movement	0.96				
7750A:							
Skelton, rarely flooded	90	Very limited		Not limited		Not limited	
		Flooding	1.00				

Table 13a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
7750B:							
Skelton, rarely flooded	90	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Slope	0.12
7750C2:							
Skelton, rarely flooded	90	Very limited		Not limited		Very limited	
		Flooding	1.00			Slope	1.00
7751A:							
Crawleyville, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00				
7787A:							
Banlic, rarely flooded	90	Very limited		Somewhat limited		Very limited	
		Depth to saturated zone	1.00	Slow water movement	0.96	Depth to saturated zone	1.00
		Flooding	1.00	Depth to saturated zone	0.94	Slow water movement	0.96
		Slow water movement	0.96				
7812E:							
Typic Hapludalfs, rarely flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Too steep	1.00	Slope	1.00
		Too steep	1.00				
8072A:							
Sharon, occasionally flooded	90	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
8460A:							
Ginat, occasionally flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Slow water movement	1.00	Slow water movement	1.00
		Slow water movement	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00			Flooding	0.60

Table 13b.--Recreational Development

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2A:							
Cisne	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
3A:							
Hoyleton	90	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.22
3B:							
Hoyleton	90	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.22
8D2:							
Hickory, eroded	90	Not limited		Not limited		Very limited	
						Too dense	1.00
						Slope	0.96
8F:							
Hickory	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.02	Too steep	1.00
12A:							
Wynoose	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
13A:							
Bluford	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.86	Depth to saturated zone	0.86	Depth to saturated zone	0.94
13B:							
Bluford	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.86	Depth to saturated zone	0.86	Depth to saturated zone	0.94
13B2:							
Bluford, eroded	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.86	Depth to saturated zone	0.86	Depth to saturated zone	0.94
14B:							
Ava	90	Not limited		Not limited		Somewhat limited	
						Depth to cemented pan	0.06
14B2:							
Ava, eroded	90	Not limited		Not limited		Somewhat limited	
						Depth to cemented pan	0.64

Table 13b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
14C2:							
Ava, eroded	90	Not limited		Not limited		Somewhat limited	
						Depth to cemented pan	0.64
						Slope	0.01
14C3:							
Ava, severely eroded	90	Not limited		Not limited		Somewhat limited	
						Depth to cemented pan	0.64
						Slope	0.01
15B:							
Parke	90	Not limited		Not limited		Not limited	
15C2:							
Parke, eroded	90	Not limited		Not limited		Somewhat limited	
						Slope	0.01
15D2:							
Parke, eroded	90	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.96
19F:							
Sylvan	90	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Too steep	1.00
		Slope	1.00	Slope	0.04		
53B:							
Bloomfield	90	Very limited		Very limited		Somewhat limited	
		Too sandy	1.00	Too sandy	1.00	Droughty	0.01
53C:							
Bloomfield	90	Very limited		Very limited		Somewhat limited	
		Too sandy	1.00	Too sandy	1.00	Droughty	0.01
						Slope	0.01
53D:							
Bloomfield	90	Very limited		Very limited		Somewhat limited	
		Too sandy	1.00	Too sandy	1.00	Slope	0.96
						Droughty	0.01
75B:							
Drury	90	Not limited		Not limited		Not limited	
87A:							
Dickinson	90	Not limited		Not limited		Not limited	
87B:							
Dickinson	90	Not limited		Not limited		Not limited	
109A:							
Racoon	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
131A:							
Alvin	90	Not limited		Not limited		Not limited	

Table 13b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
131B:							
Alvin	90	Not limited		Not limited		Not limited	
131C:							
Alvin	90	Not limited		Not limited		Somewhat limited	
						Slope	0.01
131F:							
Alvin	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.22	Too steep	1.00
142A:							
Patton	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
142A+:							
Patton, overwash	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
164A:							
Stoy	90	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
164B:							
Stoy	90	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
165A:							
Weir	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
173A:							
McGary	90	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
173B2:							
McGary, eroded	90	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
176A:							
Marissa	90	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
178A:							
Ruark	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00

Table 13b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Paths and trails: Value	Off-road motorcycle trails: Rating class and limiting features	Off-road motorcycle trails: Value	Golf fairways: Rating class and limiting features	Golf fairways: Value
184A:							
Roby	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.01	Too sandy	0.01	Depth to saturated zone	0.19
208A:							
Sexton	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
214B:							
Hosmer	90	Not limited		Not limited		Somewhat limited	
						Depth to cemented pan	0.64
214B2:							
Hosmer, eroded	90	Not limited		Not limited		Somewhat limited	
						Depth to cemented pan	0.86
214C2:							
Hosmer, eroded	90	Not limited		Not limited		Somewhat limited	
						Depth to cemented pan	0.86
						Slope	0.01
214C3:							
Hosmer, severely eroded	90	Not limited		Not limited		Somewhat limited	
						Depth to cemented pan	0.95
						Slope	0.01
231A:							
Evansville	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
301B:							
Grantsburg	90	Not limited		Not limited		Somewhat limited	
						Depth to cemented pan	0.01
308B:							
Alford	90	Not limited		Not limited		Not limited	
308B2:							
Alford, eroded	90	Not limited		Not limited		Not limited	
308C2:							
Alford, eroded	90	Not limited		Not limited		Somewhat limited	
						Slope	0.01
308C3:							
Alford, severely eroded	90	Not limited		Not limited		Somewhat limited	
						Slope	0.01

Table 13b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
308D2:							
Alford, eroded	90	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.96
308D3:							
Alford, severely eroded	90	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.96
337A:							
Creal	90	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.22
339F:							
Wellston	90	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Too steep	1.00
		Slope	1.00	Slope	0.04		
340C2:							
Zanesville, eroded	90	Not limited		Not limited		Very limited	
						Depth to cemented pan	1.00
						Droughty	0.01
						Slope	0.01
340C3:							
Zanesville, severely eroded	90	Not limited		Not limited		Very limited	
						Depth to cemented pan	1.00
						Droughty	0.02
						Slope	0.01
340D2:							
Zanesville, eroded	90	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Depth to cemented pan	1.00
						Slope	0.96
						Droughty	0.01
340D3:							
Zanesville, severely eroded	90	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Depth to cemented pan	1.00
						Slope	0.96
						Droughty	0.02
434A:							
Ridgway	90	Not limited		Not limited		Not limited	
434B:							
Ridgway	90	Not limited		Not limited		Not limited	
434C2:							
Ridgway, eroded	90	Not limited		Not limited		Not limited	

Table 13b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
436A:							
Meadowbank	90	Not limited		Not limited		Not limited	
436B:							
Meadowbank	90	Not limited		Not limited		Not limited	
445A:							
Newhaven	90	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
446A:							
Springerton	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
453B:							
Muren	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.32	Depth to saturated zone	0.32	Depth to saturated zone	0.68
467B2:							
Markland, eroded	90	Not limited		Not limited		Not limited	
467C2:							
Markland, eroded	90	Not limited		Not limited		Not limited	
467C3:							
Markland, severely eroded	90	Not limited		Not limited		Somewhat limited	
						Slope	0.01
482B:							
Uniontown	90	Not limited		Not limited		Not limited	
482B2:							
Uniontown, eroded	90	Not limited		Not limited		Not limited	
482C2:							
Uniontown, eroded	90	Not limited		Not limited		Not limited	
482C3:							
Uniontown, severely eroded	90	Not limited		Not limited		Somewhat limited	
						Slope	0.01
483A:							
Henshaw	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
484A:							
Harco	90	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
585F:							
Negley	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.04	Too steep	1.00

Table 13b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
630C3:							
Navlys, severely eroded	90	Not limited		Not limited		Not limited	
630D3:							
Navlys, severely eroded	90	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Too steep	1.00
750A:							
Skelton	90	Not limited		Not limited		Not limited	
750B:							
Skelton	90	Not limited		Not limited		Not limited	
750C2:							
Skelton, eroded	90	Not limited		Not limited		Not limited	
751A:							
Crawleyville	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
784F:							
Berks	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.04	Too steep	1.00
						Droughty	0.97
						Depth to bedrock	0.42
802B:							
Orthents, loamy	90	Not limited		Not limited		Very limited	
						Too dense	1.00
865:							
Pits, gravel	90	Not rated		Not rated		Not rated	
898G:							
Sylvan	45	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Too steep	1.00
		Water erosion	1.00	Slope	1.00		
Hickory	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Too steep	1.00
908G:							
Kell	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Too steep	1.00
						Depth to bedrock	0.10
Hickory	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Too steep	1.00
929D3:							
Hickory, severely eroded	55	Not limited		Not limited		Somewhat limited	
						Slope	0.96

Table 13b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
929D3:							
Ava, severely eroded	35	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.96
						Depth to cemented pan	0.64
1288A:							
Petrolia, undrained, frequently flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40	Ponding	1.00
3092A:							
Sarpy, frequently flooded------------	90	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
						Droughty	0.69
3103L:							
Houghton, frequently flooded------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Organic matter content	1.00	Organic matter content	1.00	Organic matter content	1.00
						Depth to saturated zone	1.00
3108A:							
Bonnie, frequently flooded------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
3142A:							
Patton, frequently flooded------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40	Ponding	1.00
3178A:							
Ruark, frequently flooded------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40	Ponding	1.00
3231A:							
Evansville, frequently flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40	Ponding	1.00

Table 13b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3302A:							
Ambraw, frequently flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40	Ponding	1.00
3304A:							
Landes, frequently flooded	90	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
3331A:							
Haymond, frequently flooded	90	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
3333A:							
Wakeland, frequently flooded	90	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.86	Depth to saturated zone	0.86	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	0.94
3382A:							
Belknap, frequently flooded	90	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.86	Depth to saturated zone	0.86	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	0.94
3420A:							
Piopolis, frequently flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
3465A:							
Montgomery, frequently flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40	Ponding	1.00
3524A:							
Zipp, frequently flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Too clayey	1.00	Too clayey	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Too clayey	1.00
		Flooding	0.40	Flooding	0.40	Ponding	1.00

Table 13b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
3597A:							
Armiesburg, frequently flooded	90	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
3601A:							
Nolin, frequently flooded------------	90	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
3602A:							
Newark, frequently flooded------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
3665A:							
Stonelick, frequently flooded	90	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
7087A:							
Dickinson, rarely flooded------------	90	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
7109A:							
Racoon, rarely flooded------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
7131A:							
Alvin, rarely flooded------------	90	Not limited		Not limited		Not limited	
7131B:							
Alvin, rarely flooded------------	90	Not limited		Not limited		Not limited	
7142A:							
Patton, rarely flooded------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
7142A+:							
Patton, rarely flooded, overwash--	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00

Table 13b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
7173A:							
McGary, rarely flooded	90	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
7173B2:							
McGary, rarely flooded	90	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
7176A:							
Marissa, rarely flooded	90	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
7178A:							
Ruark, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
7184A:							
Roby, rarely flooded	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.01	Too sandy	0.01	Depth to saturated zone	0.19
7208A:							
Sexton, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
7434A:							
Ridgway, rarely flooded	90	Not limited		Not limited		Not limited	
7434B:							
Ridgway, rarely flooded	90	Not limited		Not limited		Not limited	
7436A:							
Meadowbank, rarely flooded	90	Not limited		Not limited		Not limited	
7445A:							
Newhaven, rarely flooded	90	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19

Table 13b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
7446A:							
Springerton, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
7462A:							
Sciotoville, rarely flooded	95	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.03
7462B:							
Sciotoville, rarely flooded	95	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.03
7465A:							
Montgomery, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
7467B2:							
Markland, rarely flooded	90	Not limited		Not limited		Not limited	
7467C2:							
Markland, rarely flooded	90	Not limited		Not limited		Not limited	
7482B:							
Uniontown, rarely flooded	90	Not limited		Not limited		Not limited	
7482C2:							
Uniontown, rarely flooded	90	Not limited		Not limited		Not limited	
7483A:							
Henshaw, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
7484A:							
Harco, rarely flooded	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
7524A:							
Zipp, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	1.00	Too clayey	1.00	Too clayey	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00

Table 13b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
7524A+:							
Zipp, rarely flooded, overwash	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
7750A:							
Skelton, rarely flooded	90	Not limited		Not limited		Not limited	
7750B:							
Skelton, rarely flooded	90	Not limited		Not limited		Not limited	
7750C2:							
Skelton, rarely flooded	90	Not limited		Not limited		Not limited	
7751A:							
Crawleyville, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
7787A:							
Banlic, rarely flooded	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.86	Depth to saturated zone	0.86	Depth to saturated zone	0.94
7812E:							
Typic Hapludalfs, rarely flooded	90	Somewhat limited		Not limited		Very limited	
		Slope	0.18			Too steep	1.00
8072A:							
Sharon, occasionally flooded	90	Not limited		Not limited		Somewhat limited	
						Flooding	0.60
8460A:							
Ginat, occasionally flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
						Flooding	0.60

Table 14.--Wildlife Habitat

(See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable)

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
2A: Cisne	Fair	Fair	Fair	Fair	Poor	Good	Good	Fair	Fair	Good.
3A: Hoyleton	Fair	Good	Good	Good	Fair	Fair	Fair	Good	Good	Fair.
3B: Hoyleton	Fair	Good	Good	Good	Fair	Fair	Poor	Good	Good	Poor.
8D2: Hickory, eroded	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
8F: Hickory	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
12A: Wynoose	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
13A: Bluford	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
13B: Bluford	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
13B2: Bluford, eroded	Fair	Good	Good	Good	Good	Poor	Poor	Good	Good	Very poor.
14B: Ava	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
14B2: Ava, eroded	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
14C2: Ava, eroded	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
14C3: Ava, severely eroded	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
15B: Parke	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
15C2: Parke, eroded	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
15D2: Parke, eroded	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.

Table 14.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
19F:										
Sylvan	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
53B:										
Bloomfield	Poor	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
53C:										
Bloomfield	Poor	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
53D:										
Bloomfield	Poor	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
75B:										
Drury	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
87A:										
Dickinson	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
87B:										
Dickinson	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
109A:										
Racoon	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
131A:										
Alvin	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
131B:										
Alvin	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
131C:										
Alvin	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
131F:										
Alvin	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
142A:										
Patton	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good.
142A+:										
Patton, overwash	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good.
164A:										
Stoy	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
164B:										
Stoy	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
165A:										
Weir	Fair	Fair	Fair	Good	Fair	Good	Good	Fair	Fair	Good.

Table 14.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
173A: McGary	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
173B2: McGary, eroded	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
176A: Marissa	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
178A: Ruark	Fair	Fair	Fair	Fair	Poor	Good	Good	Fair	Fair	Good.
184A: Roby	Fair	Good	Good	Good	Good	Fair	Poor	Good	Good	Poor.
208A: Sexton	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
214B: Hosmer	Fair	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
214B2: Hosmer, eroded	Fair	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
214C2: Hosmer, eroded	Fair	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
214C3: Hosmer, severely eroded	Fair	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
231A: Evansville	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
301B: Grantsburg	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
308B: Alford	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
308B2: Alford, eroded	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
308C2: Alford, eroded	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
308C3: Alford, severely eroded	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
308D2: Alford, eroded	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.

Table 14.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
308D3:										
Alford, severely eroded	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
337A:										
Creal	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Poor.
339F:										
Wellston	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
340C2:										
Zanesville, eroded	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
340C3:										
Zanesville, severely eroded	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
340D2:										
Zanesville, eroded	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
340D3:										
Zanesville, severely eroded	Poor	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
434A:										
Ridgway	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
434B:										
Ridgway	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
434C2:										
Ridgway, eroded	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
436A:										
Meadowbank	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
436B:										
Meadowbank	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
445A:										
Newhaven	Good	Good	Good	Good	Fair	Fair	Fair	Good	Good	Fair.
446A:										
Springerton	Fair	Fair	Good	Good	Good	Good	Good	Fair	Good	Good.
453B:										
Muren	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
467B2:										
Markland, eroded	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
467C2:										
Markland, eroded	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.

Table 14.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
467C3:										
Markland, severely eroded	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
482B:										
Uniontown	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
482B2:										
Uniontown, eroded	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
482C2:										
Uniontown, eroded	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
482C3:										
Uniontown, severely eroded	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
483A:										
Henshaw	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
484A:										
Harco	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
585F:										
Negley	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
630C3:										
Navlys, severely eroded	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
630D3:										
Navlys, severely eroded	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
750A:										
Skelton	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
750B:										
Skelton	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
750C2:										
Skelton, eroded	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
751A:										
Crawleyville	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
784F:										
Berks	Very poor.	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.

Table 14.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
802B:										
Orthents, loamy	Good	Fair	Good	Good	Good	Poor	Poor	Good	Good	Poor.
865. Pits, gravel										
898G:										
Sylvan	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
Hickory	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
908G:										
Kell	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
Hickory	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
929D3:										
Hickory, severely eroded	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Poor.
Ava, severely eroded	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Poor.
1288A:										
Petrolia, undrained, frequently flooded	Poor	Fair	Fair	Fair	Poor	Good	Good	Poor	Fair	Good.
3092A:										
Sarpy, frequently flooded	Poor	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
3103L:										
Houghton, frequently flooded	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.
3108A:										
Bonnie, frequently flooded	Poor	Fair	Fair	Fair	Poor	Good	Good	Fair	Fair	Good.
3142A:										
Patton, frequently flooded	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good.
3178A:										
Ruark, frequently flooded	Fair	Fair	Fair	Fair	Poor	Good	Good	Fair	Fair	Good.
3231A:										
Evansville, frequently flooded	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.

Table 14.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
3302A: Ambraw, frequently flooded	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
3304A: Landes, frequently flooded	Poor	Fair	Fair	Good	Good	Poor	Very poor.	Fair	Good	Very poor.
3331A: Haymond, frequently flooded	Good	Good	Fair	Good	Good	Poor	Poor	Good	Good	Poor.
3333A: Wakeland, frequently flooded	Fair	Fair	Fair	Good	Poor	Fair	Fair	Fair	Good	Fair.
3382A: Belknap, frequently flooded	Fair	Good	Good	Good	Poor	Fair	Fair	Good	Good	Fair.
3420A: Piopolis, frequently flooded	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
3465A: Montgomery, frequently flooded	Fair	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.
3524A: Zipp, frequently flooded	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
3597A: Armiesburg, frequently flooded	Poor	Fair	Good	Good	Good	Poor	Poor	Fair	Good	Poor.
3601A: Nolin, frequently flooded	Poor	Fair	Fair	Good	Good	Poor	Very poor.	Fair	Fair	Very poor.
3602A: Newark, frequently flooded	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair.
3665A: Stonelick, frequently flooded	Poor	Fair	Fair	Good	Good	Poor	Very poor.	Fair	Good	Very poor.
7087A: Dickinson, rarely flooded	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.

Table 14.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
7109A: Racoon, rarely flooded	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
7131A: Alvin, rarely flooded	Good	Fair	Good	Good	Good	Poor	Poor	Good	Good	Poor.
7131B: Alvin, rarely flooded	Good	Fair	Good	Good	Good	Poor	Poor	Good	Good	Poor.
7142A: Patton, rarely flooded	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good.
7142A+: Patton, rarely flooded, overwash	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good.
7173A: McGary, rarely flooded	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
7173B2: McGary, rarely flooded	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
7176A: Marissa, rarely flooded	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
7178A: Ruark, rarely flooded	Fair	Fair	Fair	Fair	Poor	Good	Good	Fair	Fair	Good.
7184A: Roby, rarely flooded	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
7208A: Sexton, rarely flooded	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
7434A: Ridgway, rarely flooded	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
7434B: Ridgway, rarely flooded	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
7436A: Meadowbank, rarely flooded	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
7445A: Newhaven, rarely flooded	Good	Good	Good	Good	Fair	Fair	Fair	Good	Good	Fair.

Table 14.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hardwood trees	Conif-erous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
7446A: Springerton, rarely flooded	Fair	Fair	Good	Good	Good	Good	Good	Fair	Good	Good.
7462A: Sciotoville, rarely flooded	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
7462B: Sciotoville, rarely flooded	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
7465A: Montgomery, rarely flooded	Fair	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.
7467B2: Markland, rarely flooded	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
7467C2: Markland, rarely flooded	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
7482B: Uniontown, rarely flooded	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
7482C2: Uniontown, rarely flooded	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
7483A: Henshaw, rarely flooded	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
7484A: Harco, rarely flooded	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
7524A: Zipp, rarely flooded	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
7524A+: Zipp, rarely flooded, overwash	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
7750A: Skelton, rarely flooded	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
7750B: Skelton, rarely flooded	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.

Table 14.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
7750C2: Skelton, rarely flooded----------	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
7751A: Crawleyville, rarely flooded---	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
7787A: Banlic, rarely flooded----------	Fair	Good	Good	Good	Good	Fair	Good	Good	Good	Fair.
7812E: Typic Hapludalfs, rarely flooded---	Poor	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
8072A: Sharon, occasionally flooded----------	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
8460A: Ginat, occasionally flooded----------	Fair	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.

Table 15a.--Building Site Development

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2A:							
Cisne	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00	Shrink-swell	0.50	Shrink-swell	1.00
3A:							
Hoyleton	90	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Depth to saturated zone	1.00	Shrink-swell	1.00
		Depth to saturated zone	0.44	Shrink-swell	0.50	Depth to saturated zone	0.44
3B:							
Hoyleton	90	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Depth to saturated zone	1.00	Shrink-swell	1.00
		Depth to saturated zone	0.44	Shrink-swell	0.50	Depth to saturated zone	0.44
8D2:							
Hickory, eroded	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
8F:							
Hickory	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
12A:							
Wynoose	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00	Shrink-swell	0.50	Shrink-swell	1.00
13A:							
Bluford	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00	Shrink-swell	0.50	Shrink-swell	1.00
13B:							
Bluford	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00	Shrink-swell	0.50	Shrink-swell	1.00
13B2:							
Bluford, eroded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00	Shrink-swell	0.50	Shrink-swell	1.00

Table 15a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
14B:							
Ava-----------------	90	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.14	Depth to thick cemented pan	1.00	Shrink-swell	0.14
		Depth to thick cemented pan	0.06	Depth to saturated zone	0.99	Depth to thick cemented pan	0.06
				Shrink-swell	0.14		
14B2:							
Ava, eroded---------	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to thick cemented pan	0.65	Depth to thick cemented pan	1.00	Depth to thick cemented pan	0.65
		Shrink-swell	0.38	Depth to saturated zone	0.99	Shrink-swell	0.38
				Shrink-swell	0.38		
14C2:							
Ava, eroded---------	90	Somewhat limited		Very limited		Very limited	
		Depth to thick cemented pan	0.65	Depth to thick cemented pan	1.00	Slope	1.00
		Shrink-swell	0.38	Depth to saturated zone	0.99	Depth to thick cemented pan	0.65
		Slope	0.01	Shrink-swell	0.38	Shrink-swell	0.38
				Slope	0.01		
14C3:							
Ava, severely eroded	90	Somewhat limited		Very limited		Very limited	
		Depth to thick cemented pan	0.65	Depth to thick cemented pan	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to saturated zone	0.99	Depth to thick cemented pan	0.65
		Slope	0.01	Shrink-swell	0.50	Shrink-swell	0.50
				Slope	0.01		
15B:							
Parke---------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
15C2:							
Parke, eroded-------	90	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Slope	0.01	Slope	1.00
		Slope	0.01			Shrink-swell	0.50
15D2:							
Parke, eroded-------	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
19F:							
Sylvan--------------	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
53B:							
Bloomfield----------	90	Not limited		Not limited		Not limited	
53C:							
Bloomfield----------	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00

Table 15a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
53D:							
Bloomfield	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
75B:							
Drury	90	Not limited		Not limited		Not limited	
87A:							
Dickinson	90	Not limited		Not limited		Not limited	
87B:							
Dickinson	90	Not limited		Not limited		Not limited	
109A:							
Racoon	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
				Shrink-swell	0.50		
131A:							
Alvin	90	Not limited		Not limited		Not limited	
131B:							
Alvin	90	Not limited		Not limited		Not limited	
131C:							
Alvin	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
131F:							
Alvin	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
142A:							
Patton	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
142A+:							
Patton, overwash	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
164A:							
Stoy	90	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.39	Shrink-swell	0.50	Depth to saturated zone	0.39
164B:							
Stoy	90	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.39	Shrink-swell	0.50	Depth to saturated zone	0.39

Table 15a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
165A:							
Weir----------------	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00	Shrink-swell	0.50	Shrink-swell	1.00
173A:							
McGary--------------	90	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.39	Shrink-swell	0.50	Depth to saturated zone	0.39
173B2:							
McGary, eroded------	90	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.39	Shrink-swell	0.50	Depth to saturated zone	0.39
176A:							
Marissa-------------	90	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.39	Shrink-swell	0.50	Depth to saturated zone	0.39
178A:							
Ruark---------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
184A:							
Roby----------------	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
208A:							
Sexton--------------	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00			Shrink-swell	1.00
214B:							
Hosmer--------------	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to thick cemented pan	0.65	Depth to thick cemented pan	1.00	Depth to thick cemented pan	0.65
		Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50
				Shrink-swell	0.50		
214B2:							
Hosmer, eroded------	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to thick cemented pan	0.87	Depth to thick cemented pan	1.00	Depth to thick cemented pan	0.87
		Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50
				Shrink-swell	0.50		

Table 15a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements Rating class and limiting features	Value	Dwellings with basements Rating class and limiting features	Value	Small commercial buildings Rating class and limiting features	Value
214C2:							
Hosmer, eroded	90	Somewhat limited Depth to thick cemented pan Shrink-swell Slope	 0.87 0.50 0.01	Very limited Depth to thick cemented pan Depth to saturated zone Shrink-swell Slope	 1.00 0.99 0.50 0.01	Very limited Slope Depth to thick cemented pan Shrink-swell	 1.00 0.87 0.50
214C3:							
Hosmer, severely eroded	90	Somewhat limited Depth to thick cemented pan Shrink-swell Slope	 0.95 0.50 0.01	Very limited Depth to thick cemented pan Depth to saturated zone Shrink-swell Slope	 1.00 0.99 0.50 0.01	Very limited Slope Depth to thick cemented pan Shrink-swell	 1.00 0.95 0.50
231A:							
Evansville	90	Very limited Depth to saturated zone Ponding Shrink-swell	 1.00 1.00 0.50	Very limited Depth to saturated zone Ponding Shrink-swell	 1.00 1.00 0.50	Very limited Depth to saturated zone Ponding Shrink-swell	 1.00 1.00 0.50
301B:							
Grantsburg	90	Somewhat limited Shrink-swell Depth to thick cemented pan	 0.50 0.01	Very limited Depth to thick cemented pan Depth to saturated zone Shrink-swell	 1.00 0.99 0.50	Somewhat limited Shrink-swell Depth to thick cemented pan	 0.50 0.01
308B:							
Alford	90	Somewhat limited Shrink-swell	 0.50	Somewhat limited Shrink-swell	 0.50	Somewhat limited Shrink-swell	 0.50
308B2:							
Alford, eroded	90	Somewhat limited Shrink-swell	 0.50	Not limited		Somewhat limited Shrink-swell	 0.50
308C2:							
Alford, eroded	90	Somewhat limited Shrink-swell Slope	 0.50 0.01	Somewhat limited Shrink-swell Slope	 0.50 0.01	Very limited Slope Shrink-swell	 1.00 0.50
308C3:							
Alford, severely eroded	90	Somewhat limited Shrink-swell Slope	 0.50 0.01	Somewhat limited Shrink-swell Slope	 0.50 0.01	Very limited Slope Shrink-swell	 1.00 0.50
308D2:							
Alford, eroded	90	Somewhat limited Slope Shrink-swell	 0.96 0.50	Somewhat limited Slope Shrink-swell	 0.96 0.50	Very limited Slope Shrink-swell	 1.00 0.50

Table 15a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
308D3:							
Alford, severely eroded	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
337A:							
Creal	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	1.00	Depth to saturated zone	0.44
				Shrink-swell	0.50		
339F:							
Wellston	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
340C2:							
Zanesville, eroded	90	Very limited		Very limited		Very limited	
		Depth to thick cemented pan	1.00	Depth to thick cemented pan	1.00	Depth to thick cemented pan	1.00
		Slope	0.01	Depth to saturated zone	0.99	Slope	1.00
				Depth to hard bedrock	0.02		
				Slope	0.01		
340C3:							
Zanesville, severely eroded	90	Very limited		Very limited		Very limited	
		Depth to thick cemented pan	1.00	Depth to thick cemented pan	1.00	Depth to thick cemented pan	1.00
		Slope	0.01	Depth to saturated zone	0.99	Slope	1.00
				Shrink-swell	0.50	Shrink-swell	0.50
				Depth to hard bedrock	0.08		
340D2:							
Zanesville, eroded	90	Very limited		Very limited		Very limited	
		Depth to thick cemented pan	1.00	Depth to thick cemented pan	1.00	Slope	1.00
		Slope	0.96	Depth to saturated zone	0.99	Depth to thick cemented pan	1.00
				Slope	0.96		
				Depth to hard bedrock	0.02		
340D3:							
Zanesville, severely eroded	90	Very limited		Very limited		Very limited	
		Depth to thick cemented pan	1.00	Depth to thick cemented pan	1.00	Slope	1.00
		Slope	0.96	Depth to saturated zone	0.99	Depth to thick cemented pan	1.00
		Shrink-swell	0.50	Slope	0.96	Shrink-swell	0.50
				Shrink-swell	0.50		

Table 15a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
434A:							
Ridgway	90	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.50			Shrink-swell	0.50
434B:							
Ridgway	90	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.50			Shrink-swell	0.50
434C2:							
Ridgway, eroded	90	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.50			Slope	0.88
						Shrink-swell	0.50
436A:							
Meadowbank	90	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.50			Shrink-swell	0.50
436B:							
Meadowbank	90	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.50			Shrink-swell	0.50
445A:							
Newhaven	90	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.39			Depth to saturated zone	0.39
446A:							
Springerton	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
453B:							
Muren	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.95	Depth to saturated zone	1.00	Depth to saturated zone	0.95
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
467B2:							
Markland, eroded	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
467C2:							
Markland, eroded	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.88
						Shrink-swell	0.50
467C3:							
Markland, severely eroded	90	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.01	Slope	0.01	Shrink-swell	0.50
482B:							
Uniontown	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50

Table 15a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
482B2:							
Uniontown, eroded---	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50
482C2:							
Uniontown, eroded---	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	0.99	Slope	0.88
						Shrink-swell	0.50
482C3:							
Uniontown, severely eroded-------------	90	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Depth to saturated zone	0.99	Slope	1.00
		Slope	0.01	Slope	0.01	Shrink-swell	0.50
483A:							
Henshaw-------------	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
484A:							
Harco---------------	90	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.39	Shrink-swell	0.50	Depth to saturated zone	0.39
585F:							
Negley--------------	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
630C3:							
Navlys, severely eroded-------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	0.15	Slope	0.97
						Shrink-swell	0.50
630D3:							
Navlys, severely eroded-------------	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to saturated zone	0.15	Shrink-swell	0.50
750A:							
Skelton-------------	90	Not limited		Not limited		Not limited	
750B:							
Skelton-------------	90	Not limited		Not limited		Not limited	
750C2:							
Skelton, eroded-----	90	Not limited		Not limited		Somewhat limited	
						Slope	0.88
751A:							
Crawleyville--------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Table 15a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
784F:							
Berks	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
		Depth to hard bedrock	0.42	Depth to hard bedrock	1.00	Depth to hard bedrock	0.42
				Depth to soft bedrock	0.42		
802B:							
Orthents, loamy	90	Not limited		Not limited		Not limited	
865:							
Pits, gravel	90	Not rated		Not rated		Not rated	
898G:							
Sylvan	45	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
Hickory	40	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
908G:							
Kell	55	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
				Depth to soft bedrock	0.10		
Hickory	35	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
929D3:							
Hickory, severely eroded	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Ava, severely eroded	35	Somewhat limited		Very limited		Very limited	
		Slope	0.96	Depth to thick cemented pan	1.00	Slope	1.00
		Depth to thick cemented pan	0.65	Depth to saturated zone	0.99	Depth to thick cemented pan	0.65
		Shrink-swell	0.50	Slope	0.96	Shrink-swell	0.50
				Shrink-swell	0.50		
1288A:							
Petrolia, undrained, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
3092A:							
Sarpy, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00

Table 15a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
3103L:							
Houghton, frequently flooded	90	Very limited		Very limited		Very limited	
		Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Organic matter content	1.00	Organic matter content	1.00	Organic matter content	1.00
3108A:							
Bonnie, frequently flooded	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
3142A:							
Patton, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
3178A:							
Ruark, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
3231A:							
Evansville, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
3302A:							
Ambraw, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
3304A:							
Landes, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00

Table 15a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
3331A:							
Haymond, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
3333A:							
Wakeland, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
3382A:							
Belknap, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
3420A:							
Piopolis, frequently flooded	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
3465A:							
Montgomery, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
3524A:							
Zipp, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
3597A:							
Armiesburg, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
3601A:							
Nolin, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00

Table 15a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
3602A:							
Newark, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
3665A:							
Stonelick, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
7087A:							
Dickinson, rarely flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
7109A:							
Racoon, rarely flooded	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
				Shrink-swell	0.50		
7131A:							
Alvin, rarely flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
7131B:							
Alvin, rarely flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
7142A:							
Patton, rarely flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
7142A+:							
Patton, rarely flooded, overwash	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50

Table 15a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
7173A:							
McGary, rarely flooded-----------	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.39	Shrink-swell	0.50	Depth to saturated zone	0.39
7173B2:							
McGary, rarely flooded-----------	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.39	Shrink-swell	0.50	Depth to saturated zone	0.39
7176A:							
Marissa, rarely flooded-----------	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.39	Shrink-swell	0.50	Depth to saturated zone	0.39
7178A:							
Ruark, rarely flooded-----------	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
7184A:							
Roby, rarely flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
7208A:							
Sexton, rarely flooded-----------	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00			Shrink-swell	1.00
7434A:							
Ridgway, rarely flooded-----------	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
7434B:							
Ridgway, rarely flooded-----------	90	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.50			Shrink-swell	0.50

Table 15a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
7436A:							
Meadowbank, rarely flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
7445A:							
Newhaven, rarely flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.39			Depth to saturated zone	0.39
7446A:							
Springerton, rarely flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
7462A:							
Sciotoville, rarely flooded	95	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.07	Shrink-swell	0.50	Depth to saturated zone	0.07
7462B:							
Sciotoville, rarely flooded	95	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.07	Shrink-swell	0.50	Depth to saturated zone	0.07
7465A:							
Montgomery, rarely flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
7467B2:							
Markland, rarely flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
7467C2:							
Markland, rarely flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.88
						Shrink-swell	0.50

Table 15a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
7482B:							
Uniontown, rarely flooded-----------	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50
7482C2:							
Uniontown, rarely flooded-----------	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Shrink-swell	0.50	Depth to saturated zone	0.99	Slope	0.88
						Shrink-swell	0.50
7483A:							
Henshaw, rarely flooded-----------	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
7484A:							
Harco, rarely flooded-----------	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
7524A:							
Zipp, rarely flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
7524A+:							
Zipp, rarely flooded, overwash--	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
7750A:							
Skelton, rarely flooded-----------	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
7750B:							
Skelton, rarely flooded-----------	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00

Table 15a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7750C2:							
Skelton, rarely flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
						Slope	0.88
7751A:							
Crawleyville, rarely flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
7787A:							
Banlic, rarely flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
7812E:							
Typic Hapludalfs, rarely flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Slope	1.00
		Too steep	1.00	Too steep	1.00	Flooding	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
8072A:							
Sharon, occasionally flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.61		
8460A:							
Ginat, occasionally flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50

Table 15b.--Building Site Development

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2A:							
Cisne	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Unstable excavation walls	0.10		
		Low strength	1.00				
		Shrink-swell	1.00				
3A:							
Hoyleton	90	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.22
		Shrink-swell	1.00	Unstable excavation walls	0.10		
		Frost action	0.50				
		Depth to saturated zone	0.22				
3B:							
Hoyleton	90	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.22
		Shrink-swell	1.00	Unstable excavation walls	0.10		
		Frost action	0.50				
		Depth to saturated zone	0.22				
8D2:							
Hickory, eroded	90	Very limited		Somewhat limited		Very limited	
		Low strength	1.00	Slope	0.96	Too dense	1.00
		Slope	0.96	Unstable excavation walls	0.10	Slope	0.96
		Shrink-swell	0.50				
		Frost action	0.50				
8F:							
Hickory	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Low strength	0.78	Unstable excavation walls	0.10		
		Shrink-swell	0.50				
		Frost action	0.50				
12A:							
Wynoose	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Unstable excavation walls	0.10		
		Low strength	1.00				
		Shrink-swell	1.00	Too clayey	0.01		
13A:							
Bluford	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.94
		Low strength	1.00				
		Shrink-swell	1.00	Unstable excavation walls	0.10		
		Depth to saturated zone	0.94				

Table 15b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
13B:							
Bluford-------------	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.94
		Low strength	1.00	Unstable excavation walls	0.10		
		Shrink-swell	1.00				
		Depth to saturated zone	0.94				
13B2:							
Bluford, eroded-----	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.94
		Low strength	1.00	Unstable excavation walls	0.10		
		Shrink-swell	1.00	Too clayey	0.01		
		Depth to saturated zone	0.94				
14B:							
Ava-----------------	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to thick cemented pan	1.00	Depth to cemented pan	0.06
		Low strength	1.00	Depth to saturated zone	0.99		
		Shrink-swell	0.14	Unstable excavation walls	0.10		
		Depth to thick cemented pan	0.06				
14B2:							
Ava, eroded---------	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to thick cemented pan	1.00	Depth to cemented pan	0.64
		Low strength	1.00	Depth to saturated zone	0.99		
		Depth to thick cemented pan	0.65	Unstable excavation walls	0.10		
		Shrink-swell	0.38				
14C2:							
Ava, eroded---------	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to thick cemented pan	1.00	Depth to cemented pan	0.64
		Low strength	1.00	Depth to saturated zone	0.99	Slope	0.01
		Depth to thick cemented pan	0.65	Unstable excavation walls	0.10		
		Shrink-swell	0.38	Slope	0.01		
		Slope	0.01				
14C3:							
Ava, severely eroded	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to thick cemented pan	1.00	Depth to cemented pan	0.64
		Low strength	1.00	Depth to saturated zone	0.99	Slope	0.01
		Depth to thick cemented pan	0.65	Unstable excavation walls	0.10		
		Shrink-swell	0.50	Slope	0.01		
		Slope	0.01				
15B:							
Parke---------------	90	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Unstable excavation walls	0.10		
		Low strength	1.00				
		Shrink-swell	0.50				

Table 15b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
15C2:							
Parke, eroded	90	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Unstable excavation walls	0.10	Slope	0.01
		Low strength	1.00	Slope	0.01		
		Shrink-swell	0.50				
		Slope	0.01				
15D2:							
Parke, eroded	90	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Slope	0.96	Slope	0.96
		Low strength	1.00	Unstable excavation walls	0.10		
		Slope	0.96				
		Shrink-swell	0.50				
19F:							
Sylvan	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Frost action	1.00	Unstable excavation walls	0.10		
		Low strength	1.00				
		Shrink-swell	0.50				
53B:							
Bloomfield	90	Not limited		Very limited		Somewhat limited	
				Unstable excavation walls	1.00	Droughty	0.01
53C:							
Bloomfield	90	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.01	Unstable excavation walls	1.00	Droughty	0.01
				Slope	0.01	Slope	0.01
53D:							
Bloomfield	90	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.96	Unstable excavation walls	1.00	Slope	0.96
				Slope	0.96	Droughty	0.01
75B:							
Drury	90	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Unstable excavation walls	0.10		
		Low strength	1.00				
87A:							
Dickinson	90	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Unstable excavation walls	1.00		
87B:							
Dickinson	90	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Unstable excavation walls	1.00		
109A:							
Racoon	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Unstable excavation walls	0.10		
		Low strength	1.00				

Table 15b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
131A:							
Alvin	90	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Unstable excavation walls	1.00		
131B:							
Alvin	90	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Unstable excavation walls	1.00		
131C:							
Alvin	90	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Unstable excavation walls	1.00	Slope	0.01
		Slope	0.01	Slope	0.01		
131F:							
Alvin	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Frost action	0.50	Unstable excavation walls	1.00		
142A:							
Patton	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Ponding	1.00	Ponding	1.00
		Low strength	1.00	Unstable excavation walls	0.10		
		Ponding	1.00				
		Shrink-swell	0.50				
142A+:							
Patton, overwash	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Ponding	1.00	Ponding	1.00
		Low strength	1.00	Unstable excavation walls	0.10		
		Ponding	1.00				
		Shrink-swell	0.50				
164A:							
Stoy	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Low strength	1.00	Unstable excavation walls	0.10		
		Shrink-swell	0.50				
		Depth to saturated zone	0.19				
164B:							
Stoy	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Low strength	1.00	Unstable excavation walls	0.10		
		Shrink-swell	0.50				
		Depth to saturated zone	0.19				

Table 15b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
165A:							
Weir	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Unstable excavation walls	0.10		
		Low strength	1.00				
		Shrink-swell	1.00				
173A:							
McGary	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Low strength	1.00	Too clayey	0.12		
		Shrink-swell	0.50	Unstable excavation walls	0.10		
		Depth to saturated zone	0.19				
173B2:							
McGary, eroded	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Low strength	1.00	Too clayey	0.12		
		Shrink-swell	0.50	Unstable excavation walls	0.10		
		Depth to saturated zone	0.19				
176A:							
Marissa	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Low strength	1.00	Unstable excavation walls	0.10		
		Shrink-swell	0.50				
		Depth to saturated zone	0.19				
178A:							
Ruark	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Unstable excavation walls	0.10		
184A:							
Roby	90	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Depth to saturated zone	0.19	Unstable excavation walls	1.00		
208A:							
Sexton	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Unstable excavation walls	1.00		
		Low strength	1.00	Too clayey	0.01		
		Shrink-swell	1.00				

Table 15b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
214B:							
Hosmer	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to thick cemented pan	1.00	Depth to cemented pan	0.64
		Low strength	1.00	Depth to saturated zone	0.99		
		Depth to thick cemented pan	0.65	Unstable excavation walls	0.10		
		Shrink-swell	0.50				
214B2:							
Hosmer, eroded	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to thick cemented pan	1.00	Depth to cemented pan	0.86
		Depth to thick cemented pan	0.87	Depth to saturated zone	0.99		
		Low strength	0.78	Unstable excavation walls	0.10		
		Shrink-swell	0.50				
214C2:							
Hosmer, eroded	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to thick cemented pan	1.00	Depth to cemented pan	0.86
		Low strength	1.00	Depth to saturated zone	0.99	Slope	0.01
		Depth to thick cemented pan	0.87	Unstable excavation walls	0.10		
		Shrink-swell	0.50	Slope	0.01		
		Slope	0.01				
214C3:							
Hosmer, severely eroded	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to thick cemented pan	1.00	Depth to cemented pan	0.95
		Low strength	1.00	Depth to saturated zone	0.99	Slope	0.01
		Depth to thick cemented pan	0.95	Unstable excavation walls	0.10		
		Shrink-swell	0.50	Slope	0.01		
		Slope	0.01				
231A:							
Evansville	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Ponding	1.00	Ponding	1.00
		Low strength	1.00	Unstable excavation walls	0.10		
		Ponding	1.00				
		Shrink-swell	0.50				
301B:							
Grantsburg	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to thick cemented pan	1.00	Depth to cemented pan	0.01
		Low strength	1.00	Depth to saturated zone	0.99		
		Shrink-swell	0.50	Unstable excavation walls	0.10		
		Depth to thick cemented pan	0.01				

Table 15b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
308B:							
Alford	90	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Unstable excavation walls	0.10		
		Low strength	1.00				
		Shrink-swell	0.50				
308B2:							
Alford, eroded	90	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Unstable excavation walls	0.10		
		Low strength	1.00				
		Shrink-swell	0.50				
308C2:							
Alford, eroded	90	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Unstable excavation walls	0.10	Slope	0.01
		Low strength	1.00				
		Shrink-swell	0.50	Slope	0.01		
		Slope	0.01				
308C3:							
Alford, severely eroded	90	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Unstable excavation walls	0.10	Slope	0.01
		Low strength	1.00				
		Shrink-swell	0.50	Slope	0.01		
		Slope	0.01				
308D2:							
Alford, eroded	90	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Slope	0.96	Slope	0.96
		Low strength	1.00	Unstable excavation walls	0.10		
		Slope	0.96				
		Shrink-swell	0.50				
308D3:							
Alford, severely eroded	90	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Slope	0.96	Slope	0.96
		Low strength	1.00	Unstable excavation walls	0.10		
		Slope	0.96				
		Shrink-swell	0.50				
337A:							
Creal	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.22
		Low strength	0.78				
		Depth to saturated zone	0.22	Unstable excavation walls	0.10		
339F:							
Wellston	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Frost action	1.00	Unstable excavation walls	0.10		
		Low strength	0.78				
		Shrink-swell	0.50				

Table 15b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
340C2:							
Zanesville, eroded	90	Very limited		Very limited		Very limited	
		Depth to thick cemented pan	1.00	Depth to thick cemented pan	1.00	Depth to cemented pan	1.00
		Frost action	1.00	Depth to saturated zone	0.99	Droughty	0.01
		Low strength	1.00	Depth to hard bedrock	0.02	Slope	0.01
		Slope	0.01	Slope	0.01		
340C3:							
Zanesville, severely eroded	90	Very limited		Very limited		Very limited	
		Depth to thick cemented pan	1.00	Depth to thick cemented pan	1.00	Depth to cemented pan	1.00
		Frost action	1.00	Depth to saturated zone	0.99	Droughty	0.02
		Low strength	1.00	Depth to hard bedrock	0.08	Slope	0.01
		Shrink-swell	0.50	Slope	0.01		
340D2:							
Zanesville, eroded	90	Very limited		Very limited		Very limited	
		Depth to thick cemented pan	1.00	Depth to thick cemented pan	1.00	Depth to cemented pan	1.00
		Frost action	1.00	Depth to saturated zone	0.99	Slope	0.96
		Low strength	1.00	Slope	0.96	Droughty	0.01
		Slope	0.96	Depth to hard bedrock	0.02		
340D3:							
Zanesville, severely eroded	90	Very limited		Very limited		Very limited	
		Depth to thick cemented pan	1.00	Depth to thick cemented pan	1.00	Depth to cemented pan	1.00
		Frost action	1.00	Depth to saturated zone	0.99	Slope	0.96
		Low strength	1.00	Slope	0.96	Droughty	0.02
		Slope	0.96	Depth to hard bedrock	0.08		
434A:							
Ridgway	90	Very limited		Very limited		Not limited	
		Frost action	1.00	Unstable excavation walls	1.00		
		Low strength	1.00				
		Shrink-swell	0.50				
434B:							
Ridgway	90	Very limited		Very limited		Not limited	
		Frost action	1.00	Unstable excavation walls	1.00		
		Low strength	1.00				
		Shrink-swell	0.50				
434C2:							
Ridgway, eroded	90	Very limited		Very limited		Not limited	
		Frost action	1.00	Unstable excavation walls	1.00		
		Low strength	1.00				
		Shrink-swell	0.50				

Table 15b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
436A:							
Meadowbank	90	Very limited		Very limited		Not limited	
		Frost action	1.00	Unstable excavation walls	1.00		
		Low strength	1.00				
		Shrink-swell	0.50				
436B:							
Meadowbank	90	Very limited		Very limited		Not limited	
		Frost action	1.00	Unstable excavation walls	1.00		
		Low strength	1.00				
		Shrink-swell	0.50				
445A:							
Newhaven	90	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Shrink-swell	0.50	Unstable excavation walls	1.00		
		Frost action	0.50				
		Depth to saturated zone	0.19				
446A:							
Springerton	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Unstable excavation walls	0.10		
		Low strength	0.22				
453B:							
Muren	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.68
		Low strength	1.00	Unstable excavation walls	0.10		
		Depth to saturated zone	0.68				
		Shrink-swell	0.50				
467B2:							
Markland, eroded	90	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Too clayey	0.32		
		Shrink-swell	0.50	Unstable excavation walls	0.10		
		Frost action	0.50				
467C2:							
Markland, eroded	90	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Too clayey	0.32		
		Shrink-swell	0.50	Unstable excavation walls	0.10		
		Frost action	0.50				
467C3:							
Markland, severely eroded	90	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Too clayey	0.32	Slope	0.01
		Shrink-swell	0.50	Unstable excavation walls	0.10		
		Frost action	0.50	Slope	0.01		
		Slope	0.01				

Table 15b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
482B:							
Uniontown	90	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Depth to saturated zone	0.99		
		Low strength	1.00	Unstable excavation walls	0.10		
		Shrink-swell	0.50				
482B2:							
Uniontown, eroded	90	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Depth to saturated zone	0.99		
		Low strength	1.00	Unstable excavation walls	0.10		
		Shrink-swell	0.50				
482C2:							
Uniontown, eroded	90	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Depth to saturated zone	0.99		
		Low strength	1.00	Unstable excavation walls	0.10		
		Shrink-swell	0.50				
482C3:							
Uniontown, severely eroded	90	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	0.99	Slope	0.01
		Low strength	1.00	Unstable excavation walls	0.10		
		Shrink-swell	0.50	Slope	0.01		
		Slope	0.01				
483A:							
Henshaw	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Low strength	1.00	Unstable excavation walls	0.10		
		Depth to saturated zone	0.78				
484A:							
Harco	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Low strength	1.00	Unstable excavation walls	0.10		
		Shrink-swell	0.50				
		Depth to saturated zone	0.19				
585F:							
Negley	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Frost action	0.50	Unstable excavation walls	0.10		
630C3:							
Navlys, severely eroded	90	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Depth to saturated zone	0.15		
		Low strength	1.00	Unstable excavation walls	0.10		
		Shrink-swell	0.50				

Table 15b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
630D3:							
Navlys, severely eroded	90	Very limited		Very limited		Very limited	
		Frost action	1.00	Too steep	1.00	Too steep	1.00
		Low strength	1.00	Depth to saturated zone	0.15		
		Too steep	1.00	Unstable excavation walls	0.10		
		Shrink-swell	0.50				
750A:							
Skelton	90	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Unstable excavation walls	0.10		
		Frost action	0.50				
750B:							
Skelton	90	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Unstable excavation walls	0.10		
		Frost action	0.50				
750C2:							
Skelton, eroded	90	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Unstable excavation walls	0.10		
		Frost action	0.50				
751A:							
Crawleyville	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Unstable excavation walls	0.10		
784F:							
Berks	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Depth to hard bedrock	1.00	Too steep	1.00
		Frost action	0.50	Too steep	1.00	Droughty	0.97
		Depth to hard bedrock	0.42	Depth to soft bedrock	0.42	Depth to bedrock	0.42
				Unstable excavation walls	0.10		
802B:							
Orthents, loamy	90	Very limited		Somewhat limited		Very limited	
		Low strength	1.00	Unstable excavation walls	0.10	Too dense	1.00
		Frost action	0.50				
865:							
Pits, gravel	90	Not rated		Not rated		Not rated	
898G:							
Sylvan	45	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Frost action	1.00	Unstable excavation walls	0.10		
		Low strength	1.00				
		Shrink-swell	0.50				

Table 15b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
898G:							
Hickory-------------	40	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Low strength	1.00	Unstable excavation walls	0.10		
		Shrink-swell	0.50				
		Frost action	0.50				
908G:							
Kell----------------	55	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Frost action	0.50	Unstable excavation walls	0.10	Depth to bedrock	0.10
				Depth to soft bedrock	0.10		
Hickory-------------	35	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Low strength	0.78	Unstable excavation walls	0.10		
		Shrink-swell	0.50				
		Frost action	0.50				
929D3:							
Hickory, severely eroded-------------	55	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.96	Slope	0.96
		Slope	0.96	Unstable excavation walls	0.10		
		Shrink-swell	0.50				
		Frost action	0.50				
Ava, severely eroded	35	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to thick cemented pan	1.00	Slope	0.96
		Low strength	1.00			Depth to cemented pan	0.64
		Slope	0.96	Depth to saturated zone	0.99		
		Depth to thick cemented pan	0.65	Slope	0.96		
		Shrink-swell	0.50	Unstable excavation walls	0.10		
1288A:							
Petrolia, undrained, frequently flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
						Depth to saturated zone	1.00
		Frost action	1.00	Ponding	1.00	Ponding	1.00
		Flooding	1.00	Flooding	0.80		
		Low strength	1.00	Unstable excavation walls	0.10		
		Ponding	1.00				
3092A:							
Sarpy, frequently flooded------------	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Unstable excavation walls	1.00	Flooding	1.00
						Droughty	0.69
				Flooding	0.80		

Table 15b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
3103L:							
Houghton, frequently flooded	90	Very limited		Very limited		Not rated	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
		Subsidence	1.00	Organic matter content	1.00		
		Frost action	1.00				
		Flooding	1.00	Flooding	0.80		
3108A:							
Bonnie, frequently flooded------------	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
						Depth to saturated zone	1.00
		Frost action	1.00	Flooding	0.80		
		Flooding	1.00	Unstable excavation walls	0.10		
		Low strength	1.00				
3142A:							
Patton, frequently flooded------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
						Depth to saturated zone	1.00
		Frost action	1.00	Ponding	1.00		
		Flooding	1.00	Flooding	0.80	Ponding	1.00
		Low strength	1.00	Unstable excavation walls	0.10		
		Ponding	1.00				
3178A:							
Ruark, frequently flooded------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
						Depth to saturated zone	1.00
		Frost action	1.00	Ponding	1.00		
		Flooding	1.00	Flooding	0.80	Ponding	1.00
		Ponding	1.00	Unstable excavation walls	0.10		
3231A:							
Evansville, frequently flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
						Depth to saturated zone	1.00
		Frost action	1.00	Ponding	1.00		
		Flooding	1.00	Flooding	0.80	Ponding	1.00
		Low strength	1.00	Unstable excavation walls	0.10		
		Ponding	1.00				
3302A:							
Ambraw, frequently flooded------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
						Depth to saturated zone	1.00
		Frost action	1.00	Ponding	1.00		
		Flooding	1.00	Flooding	0.80	Ponding	1.00
		Low strength	1.00	Unstable excavation walls	0.10		
		Ponding	1.00				

Table 15b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
3304A:							
Landes, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Unstable excavation walls	1.00	Flooding	1.00
		Frost action	0.50	Flooding	0.80		
3331A:							
Haymond, frequently flooded	90	Very limited		Somewhat limited		Very limited	
		Frost action	1.00	Flooding	0.80	Flooding	1.00
		Flooding	1.00	Unstable excavation walls	0.10		
3333A:							
Wakeland, frequently flooded	90	Very limited		Very limited		Very limited	
		Frost action	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Flooding	0.80	Depth to saturated zone	0.94
		Depth to saturated zone	0.94	Unstable excavation walls	0.10		
3382A:							
Belknap, frequently flooded	90	Very limited		Very limited		Very limited	
		Frost action	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Flooding	0.80	Depth to saturated zone	0.94
		Depth to saturated zone	0.94	Unstable excavation walls	0.10		
3420A:							
Piopolis, frequently flooded	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Frost action	1.00	Flooding	0.80	Depth to saturated zone	1.00
		Flooding	1.00	Unstable excavation walls	0.10		
		Low strength	1.00				
3465A:							
Montgomery, frequently flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Frost action	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.80	Ponding	1.00
		Low strength	1.00	Unstable excavation walls	0.10		
		Shrink-swell	1.00	Too clayey	0.02		

Table 15b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
3524A:							
Zipp, frequently flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Frost action	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.80	Too clayey	1.00
		Low strength	1.00	Too clayey	0.32	Ponding	1.00
		Shrink-swell	1.00	Unstable excavation walls	0.10		
3597A:							
Armiesburg, frequently flooded	90	Very limited		Somewhat limited		Very limited	
		Frost action	1.00	Flooding	0.80	Flooding	1.00
		Flooding	1.00	Unstable excavation walls	0.10		
		Low strength	1.00				
		Shrink-swell	0.50				
3601A:							
Nolin, frequently flooded	90	Very limited		Somewhat limited		Very limited	
		Frost action	1.00	Flooding	0.80	Flooding	1.00
		Flooding	1.00	Unstable excavation walls	0.10		
		Low strength	1.00				
3602A:							
Newark, frequently flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Frost action	1.00	Flooding	0.80	Depth to saturated zone	1.00
		Flooding	1.00	Unstable excavation walls	0.10		
		Low strength	1.00				
3665A:							
Stonelick, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Unstable excavation walls	1.00	Flooding	1.00
		Frost action	0.50	Flooding	0.80		
7087A:							
Dickinson, rarely flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Unstable excavation walls	1.00	Flooding	1.00
		Frost action	0.50	Flooding	0.80		
7109A:							
Racoon, rarely flooded	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Unstable excavation walls	0.10		
		Low strength	1.00				
		Flooding	0.40				

Table 15b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
7131A:							
Alvin, rarely flooded	90	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Unstable excavation walls	1.00		
		Flooding	0.40				
7131B:							
Alvin, rarely flooded	90	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Unstable excavation walls	1.00		
		Flooding	0.40				
7142A:							
Patton, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Ponding	1.00	Ponding	1.00
		Low strength	1.00	Unstable excavation walls	0.10		
		Ponding	1.00				
		Shrink-swell	0.50				
7142A+:							
Patton, rarely flooded, overwash	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Ponding	1.00	Ponding	1.00
		Low strength	1.00	Unstable excavation walls	0.10		
		Ponding	1.00				
		Shrink-swell	0.50				
7173A:							
McGary, rarely flooded	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Low strength	1.00	Too clayey	0.12		
		Shrink-swell	0.50	Unstable excavation walls	0.10		
		Flooding	0.40				
		Depth to saturated zone	0.19				
7173B2:							
McGary, rarely flooded	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Low strength	1.00	Too clayey	0.12		
		Shrink-swell	0.50	Unstable excavation walls	0.10		
		Flooding	0.40				
		Depth to saturated zone	0.19				

Table 15b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
7176A:							
Marissa, rarely flooded	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Low strength	1.00	Unstable excavation walls	0.10		
		Shrink-swell	0.50				
		Flooding	0.40				
		Depth to saturated zone	0.19				
7178A:							
Ruark, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Unstable excavation walls	0.10		
		Flooding	0.40				
7184A:							
Roby, rarely flooded	90	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Flooding	0.40	Unstable excavation walls	1.00		
		Depth to saturated zone	0.19				
7208A:							
Sexton, rarely flooded	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Unstable excavation walls	1.00		
		Low strength	1.00	Too clayey	0.01		
		Shrink-swell	1.00				
7434A:							
Ridgway, rarely flooded	90	Very limited		Very limited		Not limited	
		Frost action	1.00	Unstable excavation walls	1.00		
		Low strength	1.00				
		Shrink-swell	0.50				
		Flooding	0.40				
7434B:							
Ridgway, rarely flooded	90	Very limited		Very limited		Not limited	
		Frost action	1.00	Unstable excavation walls	1.00		
		Low strength	1.00				
		Shrink-swell	0.50				
7436A:							
Meadowbank, rarely flooded	90	Very limited		Very limited		Not limited	
		Frost action	1.00	Unstable excavation walls	1.00		
		Low strength	1.00				
		Shrink-swell	0.50				
		Flooding	0.40				

Table 15b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
7445A:							
Newhaven, rarely flooded-----------	90	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Shrink-swell	0.50	Unstable excavation walls	1.00		
		Frost action	0.50				
		Flooding	0.40				
		Depth to saturated zone	0.19				
7446A:							
Springerton, rarely flooded-----------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Unstable excavation walls	0.10		
		Flooding	0.40				
		Low strength	0.22				
7462A:							
Sciotoville, rarely flooded-----------	95	Somewhat limited		Very limited		Somewhat limited	
		Low strength	0.78	Depth to saturated zone	1.00	Depth to saturated zone	0.03
		Shrink-swell	0.50	Unstable excavation walls	0.10		
		Frost action	0.50				
		Flooding	0.40				
		Depth to saturated zone	0.03				
7462B:							
Sciotoville, rarely flooded-----------	95	Somewhat limited		Very limited		Somewhat limited	
		Low strength	0.78	Depth to saturated zone	1.00	Depth to saturated zone	0.03
		Shrink-swell	0.50	Unstable excavation walls	0.10		
		Frost action	0.50				
		Flooding	0.40				
		Depth to saturated zone	0.03				
7465A:							
Montgomery, rarely flooded-----------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Ponding	1.00	Ponding	1.00
		Low strength	1.00	Unstable excavation walls	0.10		
		Shrink-swell	1.00				
		Ponding	1.00	Too clayey	0.02		
7467B2:							
Markland, rarely flooded-----------	90	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Too clayey	0.32		
		Shrink-swell	0.50	Unstable excavation walls	0.10		
		Frost action	0.50				
		Flooding	0.40				

Table 15b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
7467C2:							
Markland, rarely flooded	90	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Too clayey	0.32		
		Shrink-swell	0.50	Unstable excavation walls	0.10		
		Frost action	0.50				
		Flooding	0.40				
7482B:							
Uniontown, rarely flooded	90	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Depth to saturated zone	0.99		
		Low strength	1.00	Unstable excavation walls	0.10		
		Shrink-swell	0.50				
		Flooding	0.40				
7482C2:							
Uniontown, rarely flooded	90	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Depth to saturated zone	0.99		
		Low strength	1.00	Unstable excavation walls	0.10		
		Shrink-swell	0.50				
		Flooding	0.40				
7483A:							
Henshaw, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Unstable excavation walls	0.10		
		Low strength	1.00				
		Flooding	0.40				
7484A:							
Harco, rarely flooded	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Low strength	1.00	Unstable excavation walls	0.10		
		Depth to saturated zone	0.78				
		Shrink-swell	0.50				
		Flooding	0.40				
7524A:							
Zipp, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Ponding	1.00	Too clayey	1.00
		Low strength	1.00	Too clayey	0.32	Ponding	1.00
		Shrink-swell	1.00	Unstable excavation walls	0.10		
		Ponding	1.00				

Table 15b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
7524A+:							
Zipp, rarely flooded, overwash	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Ponding	1.00	Ponding	1.00
		Low strength	1.00	Unstable excavation walls	0.10		
		Shrink-swell	1.00	Too clayey	0.08		
		Ponding	1.00				
7750A:							
Skelton, rarely flooded	90	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Unstable excavation walls	0.10		
		Frost action	0.50				
		Flooding	0.40				
7750B:							
Skelton, rarely flooded	90	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Unstable excavation walls	0.10		
		Frost action	0.50				
		Flooding	0.40				
7750C2:							
Skelton, rarely flooded	90	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Unstable excavation walls	0.10		
		Frost action	0.50				
		Flooding	0.40				
7751A:							
Crawleyville, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Unstable excavation walls	0.10		
		Flooding	0.40				
7787A:							
Banlic, rarely flooded	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.94
		Depth to saturated zone	0.94	Unstable excavation walls	0.10		
		Flooding	0.40				
7812E:							
Typic Hapludalfs, rarely flooded	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Shrink-swell	0.50	Unstable excavation walls	0.10		
		Frost action	0.50				
		Flooding	0.40				

Table 15b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
8072A:							
Sharon, occasionally flooded	90	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	0.61	Flooding	0.60
		Flooding	1.00	Flooding	0.60		
				Unstable excavation walls	0.10		
8460A:							
Ginat, occasionally flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Ponding	1.00	Ponding	1.00
		Flooding	1.00	Flooding	0.60	Flooding	0.60
		Low strength	1.00	Unstable excavation walls	0.10		
		Ponding	1.00				

Table 16a.--Sanitary Facilities

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
2A:					
Cisne	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00		
3A:					
Hoyleton	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00		
3B:					
Hoyleton	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slope	0.08
8D2:					
Hickory, eroded	90	Somewhat limited		Very limited	
		Slope	0.96	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
8F:					
Hickory	90	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
12A:					
Wynoose	90	Very limited		Very limited	
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00		
13A:					
Bluford	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00		

Table 16a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
13B:					
Bluford	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slope	0.32
13B2:					
Bluford, eroded	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slope	0.32
14B:					
Ava	90	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.17
		Slow water movement	1.00	Slope	0.08
14B2:					
Ava, eroded	90	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Slope	0.32
		Slow water movement	1.00	Depth to saturated zone	0.17
14C2:					
Ava, eroded	90	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slow water movement	1.00	Depth to saturated zone	0.17
		Slope	0.01		
14C3:					
Ava, severely eroded	90	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slow water movement	1.00	Depth to saturated zone	0.17
		Slope	0.01		
15B:					
Parke	90	Somewhat limited		Somewhat limited	
		Slow water movement	0.46	Seepage	0.53
				Slope	0.32

Table 16a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
15C2:					
Parke, eroded	90	Somewhat limited		Very limited	
		Slow water movement	0.46	Slope	1.00
		Slope	0.01	Seepage	0.53
15D2:					
Parke, eroded	90	Somewhat limited		Very limited	
		Slope	0.96	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
19F:					
Sylvan	90	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
53B:					
Bloomfield	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Filtering capacity	1.00	Slope	0.08
53C:					
Bloomfield	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Filtering capacity	1.00	Slope	1.00
		Slope	0.01		
53D:					
Bloomfield	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Slope	0.96		
75B:					
Drury	90	Somewhat limited		Somewhat limited	
		Slow water movement	0.46	Seepage	0.53
				Slope	0.32
87A:					
Dickinson	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
87B:					
Dickinson	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.18

Table 16a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
109A:					
Racoon	90	Very limited		Very limited	
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00		
131A:					
Alvin	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
131B:					
Alvin	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.32
131C:					
Alvin	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slope	0.01	Slope	1.00
131F:					
Alvin	90	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
142A:					
Patton	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
		Slow water movement	0.46	Seepage	0.53
142A+:					
Patton, overwash	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
		Slow water movement	0.46	Seepage	0.53
164A:					
Stoy	90	Very limited		Somewhat limited	
		Slow water movement	1.00	Depth to saturated zone	0.75
		Depth to saturated zone	1.00	Seepage	0.53
164B:					
Stoy	90	Very limited		Somewhat limited	
		Slow water movement	1.00	Depth to saturated zone	0.75
		Depth to saturated zone	1.00	Seepage	0.53
				Slope	0.32

Table 16a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
165A:					
Weir	90	Very limited		Very limited	
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00		
173A:					
McGary	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00		
173B2:					
McGary, eroded	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slope	0.08
176A:					
Marissa	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.72	Seepage	0.28
178A:					
Ruark	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Seepage	0.53
184A:					
Roby	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
208A:					
Sexton	90	Very limited		Very limited	
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
214B:					
Hosmer	90	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Seepage	0.53
		Slow water movement	0.46	Slope	0.32
				Depth to saturated zone	0.17

Table 16a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
214B2:					
Hosmer, eroded	90	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Seepage	0.53
				Slope	0.32
		Slow water movement	0.46	Depth to saturated zone	0.17
214C2:					
Hosmer, eroded	90	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Slope	1.00
				Seepage	0.53
		Slow water movement	0.46	Depth to saturated zone	0.17
		Slope	0.01		
214C3:					
Hosmer, severely eroded	90	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Slope	1.00
				Seepage	0.53
		Slope	0.01	Depth to saturated zone	0.17
231A:					
Evansville	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
		Slow water movement	0.46	Seepage	0.53
301B:					
Grantsburg	90	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Seepage	0.53
				Slope	0.32
		Slow water movement	1.00	Depth to saturated zone	0.17
308B:					
Alford	90	Somewhat limited		Somewhat limited	
		Slow water movement	0.46	Seepage	0.53
				Slope	0.32
308B2:					
Alford, eroded	90	Somewhat limited		Somewhat limited	
		Slow water movement	0.46	Seepage	0.53
				Slope	0.32

Table 16a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
308C2:					
Alford, eroded	90	Somewhat limited		Very limited	
		Slow water movement	0.46	Slope	1.00
		Slope	0.01	Seepage	0.53
308C3:					
Alford, severely eroded	90	Somewhat limited		Very limited	
		Slow water movement	0.46	Slope	1.00
		Slope	0.01	Seepage	0.53
308D2:					
Alford, eroded	90	Somewhat limited		Very limited	
		Slope	0.96	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
308D3:					
Alford, severely eroded	90	Somewhat limited		Very limited	
		Slope	0.96	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
337A:					
Creal	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00		
339F:					
Wellston	90	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
		Depth to bedrock	0.27		
340C2:					
Zanesville, eroded	90	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Depth to bedrock	0.41	Seepage	0.53
		Slope	0.01	Depth to saturated zone	0.17
				Depth to hard bedrock	0.02

Table 16a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
340C3:					
Zanesville, severely eroded	90	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Depth to bedrock	0.52	Seepage	0.53
		Slope	0.01	Depth to saturated zone	0.17
				Depth to hard bedrock	0.08
340D2:					
Zanesville, eroded	90	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slope	0.96	Seepage	0.53
		Depth to bedrock	0.41	Depth to saturated zone	0.17
				Depth to hard bedrock	0.02
340D3:					
Zanesville, severely eroded	90	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slope	0.96	Seepage	0.53
		Depth to bedrock	0.52	Depth to saturated zone	0.17
				Depth to hard bedrock	0.08
434A:					
Ridgway	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.46		
434B:					
Ridgway	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.46	Slope	0.18
434C2:					
Ridgway, eroded	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.46	Slope	1.00

Table 16a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
436A:					
Meadowbank----------	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.46		
436B:					
Meadowbank----------	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.08
		Slow water movement	0.46		
445A:					
Newhaven------------	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
				Depth to saturated zone	1.00
		Seepage, bottom layer	1.00		
		Slow water movement	0.46		
446A:					
Springerton---------	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
		Slow water movement	0.46	Seepage	0.53
453B:					
Muren---------------	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53
				Slope	0.32
467B2:					
Markland, eroded----	90	Very limited		Somewhat limited	
		Slow water movement	1.00	Slope	0.32
467C2:					
Markland, eroded----	90	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
467C3:					
Markland, severely eroded------------	90	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	0.01		

Table 16a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
482B:					
Uniontown	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.72	Seepage	0.53
				Slope	0.08
482B2:					
Uniontown, eroded	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.72	Seepage	0.53
				Slope	0.08
482C2:					
Uniontown, eroded	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.72	Slope	1.00
				Seepage	0.53
482C3:					
Uniontown, severely eroded	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.72	Slope	1.00
		Slope	0.01	Seepage	0.53
483A:					
Henshaw	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00		
484A:					
Harco	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53
585F:					
Negley	90	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
630C3:					
Navlys, severely eroded	90	Somewhat limited		Very limited	
		Slow water movement	0.46	Slope	1.00
		Depth to saturated zone	0.40	Seepage	0.53

Table 16a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
630D3:					
Navlys, severely eroded	90	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
		Depth to saturated zone	0.40		
750A:					
Skelton	90	Somewhat limited		Somewhat limited	
		Slow water movement	0.46	Seepage	0.53
750B:					
Skelton	90	Somewhat limited		Somewhat limited	
		Slow water movement	0.46	Seepage	0.53
				Slope	0.08
750C2:					
Skelton, eroded	90	Somewhat limited		Very limited	
		Slow water movement	0.46	Slope	1.00
				Seepage	0.53
751A:					
Crawleyville	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53
784F:					
Berks	90	Very limited		Very limited	
		Too steep	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
				Seepage	1.00
802B:					
Orthents, loamy	90	Very limited		Somewhat limited	
		Slow water movement	1.00	Slope	0.08
865:					
Pits, gravel	90	Not rated		Not rated	
898G:					
Sylvan	45	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
Hickory	40	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53

Table 16a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
908G:					
Kell	55	Very limited		Very limited	
		Too steep	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
Hickory	35	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
929D3:					
Hickory, severely eroded	55	Somewhat limited		Very limited	
		Slope	0.96	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
Ava, severely eroded	35	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slow water movement	1.00	Depth to saturated zone	0.17
		Slope	0.96		
1288A:					
Petrolia, undrained, frequently flooded	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00		
3092A:					
Sarpy, frequently flooded	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00		
3103L:					
Houghton, frequently flooded	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Subsidence	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00

Table 16a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
3108A:					
Bonnie, frequently flooded	90	Very limited		Very limited	
		Flooding	1.00	Ponding	1.00
		Ponding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00		
3142A:					
Patton, frequently flooded	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
		Slow water movement	0.46	Seepage	0.53
3178A:					
Ruark, frequently flooded	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Ponding	1.00
				Seepage	0.53
		Ponding	1.00		
3231A:					
Evansville, frequently flooded	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
		Slow water movement	0.46	Seepage	0.53
3302A:					
Ambraw, frequently flooded	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Ponding	1.00
				Seepage	0.53
		Ponding	1.00		
3304A:					
Landes, frequently flooded	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Seepage, bottom layer	1.00	Seepage	1.00

Table 16a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
3331A:					
Haymond, frequently flooded	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Slow water movement	0.46	Seepage	0.53
3333A:					
Wakeland, frequently flooded	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53
3382A:					
Belknap, frequently flooded	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.72	Seepage	0.28
3420A:					
Piopolis, frequently flooded	90	Very limited		Very limited	
		Flooding	1.00	Ponding	1.00
		Slow water movement	1.00	Flooding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00		
3465A:					
Montgomery, frequently flooded	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00		
3524A:					
Zipp, frequently flooded	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00		

Table 16a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
3597A:					
Armiesburg, frequently flooded	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Slow water movement	0.46	Seepage	0.53
3601A:					
Nolin, frequently flooded	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Slow water movement	0.46	Seepage	0.53
3602A:					
Newark, frequently flooded	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53
3665A:					
Stonelick, frequently flooded	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
7087A:					
Dickinson, rarely flooded	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
7109A:					
Racoon, rarely flooded	90	Very limited		Very limited	
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Flooding	0.40
		Flooding	0.40		
7131A:					
Alvin, rarely flooded	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Flooding	0.40	Flooding	0.40
7131B:					
Alvin, rarely flooded	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Flooding	0.40	Flooding	0.40
				Slope	0.32

Table 16a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
7142A:					
Patton, rarely flooded	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
		Slow water movement	0.46	Seepage	0.53
		Flooding	0.40	Flooding	0.40
7142A+:					
Patton, rarely flooded, overwash	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
		Slow water movement	0.46	Seepage	0.53
		Flooding	0.40	Flooding	0.40
7173A:					
McGary, rarely flooded	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Flooding	0.40
		Flooding	0.40		
7173B2:					
McGary, rarely flooded	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Flooding	0.40
				Slope	0.08
		Flooding	0.40		
7176A:					
Marissa, rarely flooded	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.72	Flooding	0.40
				Seepage	0.28
		Flooding	0.40		
7178A:					
Ruark, rarely flooded	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Ponding	1.00
				Seepage	0.53
		Ponding	1.00	Flooding	0.40
		Flooding	0.40		

Table 16a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
7184A:					
Roby, rarely flooded	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40
7208A:					
Sexton, rarely flooded	90	Very limited		Very limited	
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40
7434A:					
Ridgway, rarely flooded	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.46	Flooding	0.40
		Flooding	0.40		
7434B:					
Ridgway, rarely flooded	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.46	Slope	0.18
7436A:					
Meadowbank, rarely flooded	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.46	Flooding	0.40
		Flooding	0.40		
7445A:					
Newhaven, rarely flooded	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Flooding	0.40
		Flooding	0.40		

Table 16a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
7446A:					
Springerton, rarely flooded	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
		Slow water movement	0.46	Seepage	0.53
		Flooding	0.40	Flooding	0.40
7462A:					
Sciotoville, rarely flooded	95	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	0.44
		Slow water movement	1.00	Flooding	0.40
		Flooding	0.40		
7462B:					
Sciotoville, rarely flooded	95	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	0.44
		Slow water movement	1.00	Flooding	0.40
		Flooding	0.40	Slope	0.32
7465A:					
Montgomery, rarely flooded	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Flooding	0.40
		Flooding	0.40		
7467B2:					
Markland, rarely flooded	90	Very limited		Somewhat limited	
		Slow water movement	1.00	Flooding	0.40
		Flooding	0.40	Slope	0.32
7467C2:					
Markland, rarely flooded	90	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Flooding	0.40	Flooding	0.40

Table 16a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
7482B:					
Uniontown, rarely flooded	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.72	Seepage	0.53
				Flooding	0.40
		Flooding	0.40	Slope	0.08
7482C2:					
Uniontown, rarely flooded	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.72	Slope	1.00
				Seepage	0.53
		Flooding	0.40	Flooding	0.40
7483A:					
Henshaw, rarely flooded	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Flooding	0.40
		Flooding	0.40		
7484A:					
Harco, rarely flooded	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53
				Flooding	0.40
		Flooding	0.40		
7524A:					
Zipp, rarely flooded	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Ponding	1.00
				Flooding	0.40
		Ponding	1.00		
		Flooding	0.40		
7524A+:					
Zipp, rarely flooded, overwash	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Ponding	1.00
				Seepage	0.53
		Ponding	1.00	Flooding	0.40
		Flooding	0.40		

Table 16a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
7750A:					
Skelton, rarely flooded	90	Somewhat limited		Somewhat limited	
		Slow water movement	0.46	Seepage	0.53
		Flooding	0.40	Flooding	0.40
7750B:					
Skelton, rarely flooded	90	Somewhat limited		Somewhat limited	
		Slow water movement	0.46	Seepage	0.53
		Flooding	0.40	Flooding	0.40
				Slope	0.08
7750C2:					
Skelton, rarely flooded	90	Somewhat limited		Very limited	
		Slow water movement	0.46	Slope	1.00
				Seepage	0.53
		Flooding	0.40	Flooding	0.40
7751A:					
Crawleyville, rarely flooded	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53
				Flooding	0.40
		Flooding	0.40		
7787A:					
Banlic, rarely flooded	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Flooding	0.40
		Flooding	0.40		
7812E:					
Typic Hapludalfs, rarely flooded	90	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
				Flooding	0.40
		Flooding	0.40		
8072A:					
Sharon, occasionally flooded	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.71
		Slow water movement	0.46	Seepage	0.53

Table 16a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
8460A:					
Ginat, occasionally flooded	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Seepage	0.53

Table 16b.--Sanitary Facilities

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2A:							
Cisne	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	0.50			Too clayey	0.50
3A:							
Hoyleton	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.88
						Too clayey	0.50
3B:							
Hoyleton	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.88
						Too clayey	0.50
8D2:							
Hickory, eroded	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.96	Slope	0.96	Slope	0.96
		Too clayey	0.50			Too clayey	0.50
8F:							
Hickory	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
						Too clayey	0.50
12A:							
Wynoose	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	0.50			Too clayey	0.50
13A:							
Bluford	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	0.50			Too clayey	0.50
13B:							
Bluford	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	0.50			Too clayey	0.50
13B2:							
Bluford, eroded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	0.50			Too clayey	0.50

Table 16b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
14B:							
Ava	90	Very limited		Very limited		Very limited	
		Depth to thick cemented pan	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	0.84	Depth to saturated zone	0.17	Too clayey	0.50
		Too clayey	0.50			Depth to saturated zone	0.44
14B2:							
Ava, eroded	90	Very limited		Very limited		Very limited	
		Depth to thick cemented pan	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	0.84	Depth to saturated zone	0.17	Too clayey	0.50
		Too clayey	0.50			Depth to saturated zone	0.44
14C2:							
Ava, eroded	90	Very limited		Very limited		Very limited	
		Depth to thick cemented pan	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	0.84	Depth to saturated zone	0.17	Too clayey	0.50
		Too clayey	0.50	Slope	0.01	Depth to saturated zone	0.44
		Slope	0.01			Slope	0.01
14C3:							
Ava, severely eroded	90	Very limited		Very limited		Very limited	
		Depth to thick cemented pan	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	0.84	Depth to saturated zone	0.17	Too clayey	0.50
		Too clayey	0.50	Slope	0.01	Depth to saturated zone	0.44
		Slope	0.01			Slope	0.01
15B:							
Parke	90	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
15C2:							
Parke, eroded	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.01	Slope	0.01	Too clayey	0.50
						Slope	0.01
15D2:							
Parke, eroded	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.96	Slope	0.96	Slope	0.96
						Too clayey	0.50
19F:							
Sylvan	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
53B:							
Bloomfield	90	Very limited		Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Too sandy	1.00
		Too sandy	1.00			Seepage	1.00

Table 16b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
53C:							
Bloomfield	90	Very limited		Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	0.50	Slope	0.01	Too sandy	0.50
		Slope	0.01			Slope	0.01
53D:							
Bloomfield	90	Very limited		Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
		Slope	0.96	Slope	0.96	Slope	0.96
		Too sandy	0.50			Too sandy	0.50
75B:							
Drury	90	Not limited		Not limited		Not limited	
87A:							
Dickinson	90	Very limited		Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Too sandy	1.00
		Too sandy	1.00			Seepage	1.00
87B:							
Dickinson	90	Very limited		Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Too sandy	1.00
		Too sandy	1.00			Seepage	1.00
109A:							
Racoon	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	0.50			Too clayey	0.50
131A:							
Alvin	90	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.52
		Too sandy	0.50			Too sandy	0.50
131B:							
Alvin	90	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.52
		Too sandy	0.50			Too sandy	0.50
131C:							
Alvin	90	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.52
		Too sandy	0.50	Slope	0.01	Too sandy	0.50
		Slope	0.01			Slope	0.01

Table 16b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
131F:							
Alvin	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.52
		Too sandy	0.50			Too sandy	0.50
142A:							
Patton	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
142A+:							
Patton, overwash	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
164A:							
Stoy	90	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.75	Depth to saturated zone	0.86
						Too clayey	0.50
164B:							
Stoy	90	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.75	Depth to saturated zone	0.86
						Too clayey	0.50
165A:							
Weir	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	0.50			Too clayey	0.50
173A:							
McGary	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
						Depth to saturated zone	0.86
173B2:							
McGary, eroded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
						Depth to saturated zone	0.86
176A:							
Marissa	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
		Too clayey	0.50			Too clayey	0.50

Table 16b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
178A:							
Ruark	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Too clayey	0.50			Too clayey	0.50
184A:							
Roby	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Depth to saturated zone	0.86
		Too sandy	1.00			Seepage	0.52
208A:							
Sexton	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too sandy	0.50			Too clayey	1.00
						Seepage	0.51
						Too sandy	0.50
214B:							
Hosmer	90	Very limited		Very limited		Very limited	
		Depth to thick cemented pan	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	0.84	Depth to saturated zone	0.17	Too clayey	0.50
		Too clayey	0.50			Depth to saturated zone	0.44
214B2:							
Hosmer, eroded	90	Very limited		Very limited		Very limited	
		Depth to thick cemented pan	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	0.84	Depth to saturated zone	0.17	Too clayey	0.50
		Too clayey	0.50			Depth to saturated zone	0.44
214C2:							
Hosmer, eroded	90	Very limited		Very limited		Very limited	
		Depth to thick cemented pan	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	0.84	Depth to saturated zone	0.17	Too clayey	0.50
		Too clayey	0.50	Slope	0.01	Depth to saturated zone	0.44
		Slope	0.01			Slope	0.01
214C3:							
Hosmer, severely eroded	90	Very limited		Very limited		Very limited	
		Depth to thick cemented pan	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	0.84	Depth to saturated zone	0.17	Too clayey	0.50
		Too clayey	0.50	Slope	0.01	Depth to saturated zone	0.44
		Slope	0.01			Slope	0.01

Table 16b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
231A:							
Evansville----------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Too clayey	0.50			Too clayey	0.50
301B:							
Grantsburg----------	90	Very limited		Very limited		Very limited	
		Depth to thick cemented pan	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	0.84	Depth to saturated zone	0.17	Too clayey	0.50
		Too clayey	0.50			Depth to saturated zone	0.44
308B:							
Alford--------------	90	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
308B2:							
Alford, eroded------	90	Not limited		Not limited		Somewhat limited	
						Too clayey	0.50
308C2:							
Alford, eroded------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Slope	0.01	Too clayey	0.50
		Slope	0.01			Slope	0.01
308C3:							
Alford, severely eroded------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Slope	0.01	Too clayey	0.50
		Slope	0.01			Slope	0.01
308D2:							
Alford, eroded------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.96	Slope	0.96	Slope	0.96
		Too clayey	0.50			Too clayey	0.50
308D3:							
Alford, severely eroded------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.96	Slope	0.96	Slope	0.96
		Too clayey	0.50			Too clayey	0.50
337A:							
Creal---------------	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.88
		Too clayey	0.50			Too clayey	0.50
339F:							
Wellston------------	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Depth to bedrock	1.00			Gravel content	0.02

Table 16b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
340C2:							
Zanesville, eroded	90	Very limited		Very limited		Very limited	
		Depth to thick cemented pan	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to bedrock	1.00	Depth to saturated zone	0.17	Too clayey	0.50
		Depth to saturated zone	0.84	Depth to bedrock	0.02	Depth to saturated zone	0.44
		Too clayey	0.50	Slope	0.01	Depth to bedrock	0.02
		Slope	0.01			Slope	0.01
340C3:							
Zanesville, severely eroded	90	Very limited		Very limited		Very limited	
		Depth to thick cemented pan	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to bedrock	1.00	Depth to saturated zone	0.17	Too clayey	0.50
		Depth to saturated zone	0.84	Depth to bedrock	0.08	Depth to saturated zone	0.44
		Too clayey	0.50	Slope	0.01	Depth to bedrock	0.08
		Slope	0.01			Slope	0.01
340D2:							
Zanesville, eroded	90	Very limited		Very limited		Very limited	
		Depth to thick cemented pan	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to bedrock	1.00	Slope	0.96	Slope	0.96
		Slope	0.96	Depth to saturated zone	0.17	Too clayey	0.50
		Depth to saturated zone	0.84	Depth to bedrock	0.02	Depth to saturated zone	0.44
		Too clayey	0.50			Depth to bedrock	0.02
340D3:							
Zanesville, severely eroded	90	Very limited		Very limited		Very limited	
		Depth to thick cemented pan	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to bedrock	1.00	Slope	0.96	Slope	0.96
		Slope	0.96	Depth to saturated zone	0.17	Too clayey	0.50
		Depth to saturated zone	0.84	Depth to bedrock	0.08	Depth to saturated zone	0.44
		Too clayey	0.50			Depth to bedrock	0.08
434A:							
Ridgway	90	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.51
						Too clayey	0.50
434B:							
Ridgway	90	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.51
						Too sandy	0.50
		Too sandy	0.50			Too clayey	0.50
434C2:							
Ridgway, eroded	90	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.51
						Too sandy	0.50
		Too sandy	0.50			Too clayey	0.50

Table 16b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
436A:							
Meadowbank	90	Very limited		Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	0.50			Too sandy	0.50
						Too clayey	0.50
436B:							
Meadowbank	90	Very limited		Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	0.50			Too sandy	0.50
						Too clayey	0.50
445A:							
Newhaven	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00			Depth to saturated zone	0.86
		Too sandy	1.00			Too sandy	0.50
						Too clayey	0.50
446A:							
Springerton	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Too clayey	0.50			Too clayey	0.50
453B:							
Muren	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Too clayey	0.50			Too clayey	0.50
467B2:							
Markland, eroded	90	Somewhat limited		Not limited		Very limited	
		Too clayey	0.50			Too clayey	1.00
467C2:							
Markland, eroded	90	Somewhat limited		Not limited		Very limited	
		Too clayey	0.50			Too clayey	1.00
467C3:							
Markland, severely eroded	90	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.01	Too clayey	1.00
		Slope	0.01			Slope	0.01
482B:							
Uniontown	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.24
482B2:							
Uniontown, eroded	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.24

Table 16b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
482C2:							
Uniontown, eroded	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.24
482C3:							
Uniontown, severely eroded	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.24
		Slope	0.01	Slope	0.01	Slope	0.01
483A:							
Henshaw	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
484A:							
Harco	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
		Too clayey	0.50			Too clayey	0.50
585F:							
Negley	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
630C3:							
Navlys, severely eroded	90	Very limited		Very limited		Not limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
630D3:							
Navlys, severely eroded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too steep	1.00
		Too steep	1.00	Too steep	1.00		
750A:							
Skelton	90	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
750B:							
Skelton	90	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
750C2:							
Skelton, eroded	90	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
751A:							
Crawleyville	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Table 16b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
784F:							
Berks	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Gravel content	0.71
						Seepage	0.52
802B:							
Orthents, loamy	90	Not limited		Not limited		Not limited	
865:							
Pits, gravel	90	Not rated		Not rated		Not rated	
898G:							
Sylvan	45	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
Hickory	40	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
						Too clayey	0.50
908G:							
Kell	55	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
						Gravel content	0.24
Hickory	35	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
						Too clayey	0.50
929D3:							
Hickory, severely eroded	55	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.96	Slope	0.96	Slope	0.96
		Too clayey	0.50			Too clayey	0.50
Ava, severely eroded	35	Very limited		Very limited		Very limited	
		Depth to thick cemented pan	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Slope	0.96	Slope	0.96	Slope	0.96
		Depth to saturated zone	0.84	Depth to saturated zone	0.17	Too clayey	0.50
		Too clayey	0.50			Depth to saturated zone	0.44
1288A:							
Petrolia, undrained, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Too clayey	0.50
		Too clayey	0.50				

Table 16b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3092A:							
Sarpy, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Too sandy	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	1.00				
3103L:							
Houghton, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Organic matter content	1.00
		Organic matter content	1.00	Seepage	1.00	Ponding	1.00
		Seepage, bottom layer	1.00	Ponding		Seepage	0.16
3108A:							
Bonnie, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00		
3142A:							
Patton, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00		
3178A:							
Ruark, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Too clayey	0.50
		Too clayey	0.50				
3231A:							
Evansville, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Too clayey	0.50
		Too clayey	0.50				

Table 16b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
3302A:							
Ambraw, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Too clayey	0.50
		Too clayey	0.50				
3304A:							
Landes, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Too sandy	0.50
		Too sandy	0.50				
3331A:							
Haymond, frequently flooded	90	Very limited		Very limited		Not limited	
		Flooding	1.00	Flooding	1.00		
3333A:							
Wakeland, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
3382A:							
Belknap, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
3420A:							
Piopolis, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Too clayey	0.50
		Too clayey	0.50				
3465A:							
Montgomery, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Too clayey	1.00	Ponding	1.00	Hard to compact	1.00
		Ponding	1.00			Ponding	1.00

Table 16b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
3524A:							
Zipp, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Too clayey	1.00	Ponding	1.00	Hard to compact	1.00
		Ponding	1.00			Ponding	1.00
3597A:							
Armiesburg, frequently flooded	90	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Too clayey	0.50
		Too clayey	0.50				
3601A:							
Nolin, frequently flooded	90	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Too clayey	0.50
		Too clayey	0.50				
3602A:							
Newark, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
3665A:							
Stonelick, frequently flooded	90	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Seepage	0.52
		Seepage, bottom layer	1.00	Seepage	1.00		
7087A:							
Dickinson, rarely flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Too sandy	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	1.00				
7109A:							
Racoon, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	0.50	Flooding	0.40	Too clayey	0.50
		Flooding	0.40				
7131A:							
Alvin, rarely flooded	90	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.52
		Too sandy	0.50	Flooding	0.40	Too sandy	0.50
		Flooding	0.40				

Table 16b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7131B:							
Alvin, rarely flooded	90	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.52
		Too sandy	0.50	Flooding	0.40	Too sandy	0.50
		Flooding	0.40				
7142A:							
Patton, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Flooding	0.40	Flooding	0.40		
7142A+:							
Patton, rarely flooded, overwash	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Flooding	0.40	Flooding	0.40		
7173A:							
McGary, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Too clayey	1.00	Flooding	0.40	Hard to compact	1.00
		Flooding	0.40			Depth to saturated zone	0.86
7173B2:							
McGary, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Too clayey	1.00	Flooding	0.40	Hard to compact	1.00
		Flooding	0.40			Depth to saturated zone	0.86
7176A:							
Marissa, rarely flooded	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
		Too clayey	0.50	Flooding	0.40	Too clayey	0.50
		Flooding	0.40				
7178A:							
Ruark, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Too clayey	0.50	Flooding	0.40	Too clayey	0.50
		Flooding	0.40				

Table 16b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
7184A:							
Roby, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Depth to saturated zone	0.86
		Too sandy	1.00	Flooding	0.40	Seepage	0.52
		Flooding	0.40				
7208A:							
Sexton, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too sandy	0.50	Flooding	0.40	Too clayey	1.00
		Flooding	0.40			Seepage	0.51
						Too sandy	0.50
7434A:							
Ridgway, rarely flooded	90	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.51
		Too sandy	0.50	Flooding	0.40	Too sandy	0.50
		Flooding	0.40			Too clayey	0.50
7434B:							
Ridgway, rarely flooded	90	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.51
		Too sandy	0.50			Too sandy	0.50
						Too clayey	0.50
7436A:							
Meadowbank, rarely flooded	90	Very limited		Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	0.50	Flooding	0.40	Too sandy	0.50
		Flooding	0.40			Too clayey	0.50
7445A:							
Newhaven, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Flooding	0.40	Depth to saturated zone	0.86
		Too sandy	1.00			Too sandy	0.50
		Flooding	0.40			Too clayey	0.50
7446A:							
Springerton, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Too clayey	0.50	Flooding	0.40	Too clayey	0.50
		Flooding	0.40				

Table 16b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7462A:							
Sciotoville, rarely flooded	95	Very limited		Somewhat limited		Somewhat limited	
		Seepage, bottom layer	1.00	Depth to saturated zone	0.44	Depth to saturated zone	0.68
		Depth to saturated zone	0.95	Flooding	0.40	Seepage	0.52
		Flooding	0.40				
7462B:							
Sciotoville, rarely flooded	95	Very limited		Somewhat limited		Somewhat limited	
		Seepage, bottom layer	1.00	Depth to saturated zone	0.44	Depth to saturated zone	0.68
		Depth to saturated zone	0.95	Flooding	0.40	Seepage	0.52
		Flooding	0.40				
7465A:							
Montgomery, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	1.00	Ponding	1.00	Too clayey	1.00
		Ponding	1.00	Flooding	0.40	Hard to compact	1.00
		Flooding	0.40			Ponding	1.00
7467B2:							
Markland, rarely flooded	90	Somewhat limited		Somewhat limited		Very limited	
		Too clayey	0.50	Flooding	0.40	Too clayey	1.00
		Flooding	0.40				
7467C2:							
Markland, rarely flooded	90	Somewhat limited		Somewhat limited		Very limited	
		Too clayey	0.50	Flooding	0.40	Too clayey	1.00
		Flooding	0.40				
7482B:							
Uniontown, rarely flooded	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.24
		Flooding	0.40	Flooding	0.40		
7482C2:							
Uniontown, rarely flooded	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.24
		Flooding	0.40	Flooding	0.40		
7483A:							
Henshaw, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40		

Table 16b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
7484A:							
Harco, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	0.50	Flooding	0.40	Too clayey	0.50
		Flooding	0.40				
7524A:							
Zipp, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	1.00	Ponding	1.00	Too clayey	1.00
		Ponding	1.00	Flooding	0.40	Hard to compact	1.00
		Flooding	0.40			Ponding	1.00
7524A+:							
Zipp, rarely flooded, overwash	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	1.00	Ponding	1.00	Too clayey	1.00
		Ponding	1.00	Flooding	0.40	Hard to compact	1.00
		Flooding	0.40			Ponding	1.00
7750A:							
Skelton, rarely flooded	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Flooding	0.40	Too clayey	0.50
		Flooding	0.40				
7750B:							
Skelton, rarely flooded	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Flooding	0.40	Too clayey	0.50
		Flooding	0.40				
7750C2:							
Skelton, rarely flooded	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Flooding	0.40	Too clayey	0.50
		Flooding	0.40				
7751A:							
Crawleyville, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40		
7787A:							
Banlic, rarely flooded	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40		

Table 16b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7812E:							
Typic Hapludalfs, rarely flooded	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.14
		Flooding	0.40	Flooding	0.40		
8072A:							
Sharon, occasionally flooded	90	Very limited		Very limited		Not limited	
		Flooding	1.00	Flooding	1.00		
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
8460A:							
Ginat, occasionally flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Too clayey	0.50
		Too clayey	0.50				

Table 17a.--Construction Materials

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
2A:					
Cisne	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
3A:					
Hoyleton	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
3B:					
Hoyleton	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
8D2:					
Hickory, eroded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
8F:					
Hickory	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
12A:					
Wynoose	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
13A:					
Bluford	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
13B:					
Bluford	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
13B2:					
Bluford, eroded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
14B:					
Ava	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 17a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel: Rating class	Value	Potential as source of sand: Rating class	Value
14B2:					
Ava, eroded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
14C2:					
Ava, eroded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
14C3:					
Ava, severely eroded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
15B:					
Parke	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
15C2:					
Parke, eroded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
15D2:					
Parke, eroded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
19F:					
Sylvan	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
53B:					
Bloomfield	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.11
		Thickest layer	0.00	Thickest layer	0.26
53C:					
Bloomfield	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.13
		Thickest layer	0.00	Thickest layer	0.26
53D:					
Bloomfield	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.13
		Thickest layer	0.00	Thickest layer	0.26
75B:					
Drury	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
87A:					
Dickinson	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.01
		Thickest layer	0.00	Bottom layer	0.67

Table 17a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
87B:					
Dickinson	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.01
		Thickest layer	0.00	Bottom layer	0.67
109A:					
Racoon	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
131A:					
Alvin	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.03
		Thickest layer	0.00	Bottom layer	0.25
131B:					
Alvin	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.03
		Thickest layer	0.00	Bottom layer	0.25
131C:					
Alvin	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.03
		Thickest layer	0.00	Bottom layer	0.25
131F:					
Alvin	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.03
		Thickest layer	0.00	Bottom layer	0.25
142A:					
Patton	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
142A+:					
Patton, overwash	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
164A:					
Stoy	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
164B:					
Stoy	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
165A:					
Weir	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
173A:					
McGary	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 17a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel: Rating class	Potential as source of gravel: Value	Potential as source of sand: Rating class	Potential as source of sand: Value
173B2:					
McGary, eroded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
176A:					
Marissa	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
178A:					
Ruark	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
184A:					
Roby	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.04
		Thickest layer	0.00	Bottom layer	0.10
208A:					
Sexton	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.08
214B:					
Hosmer	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
214B2:					
Hosmer, eroded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
214C2:					
Hosmer, eroded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
214C3:					
Hosmer, severely eroded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
231A:					
Evansville	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
301B:					
Grantsburg	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
308B:					
Alford	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 17a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel: Rating class	Value	Potential as source of sand: Rating class	Value
308B2:					
Alford, eroded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
308C2:					
Alford, eroded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
308C3:					
Alford, severely eroded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
308D2:					
Alford, eroded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
308D3:					
Alford, severely eroded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
337A:					
Creal	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
339F:					
Wellston	90	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.11	Thickest layer	0.00
340C2:					
Zanesville, eroded	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
340C3:					
Zanesville, severely eroded	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
340D2:					
Zanesville, eroded	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
340D3:					
Zanesville, severely eroded	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00

Table 17a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel: Rating class	Value	Potential as source of sand: Rating class	Value
434A:					
Ridgway-------------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.08
434B:					
Ridgway-------------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.08
434C2:					
Ridgway, eroded-----	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.08
436A:					
Meadowbank----------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.10
436B:					
Meadowbank----------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.10
445A:					
Newhaven------------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
446A:					
Springerton---------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
453B:					
Muren---------------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
467B2:					
Markland, eroded----	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
467C2:					
Markland, eroded----	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
467C3:					
Markland, severely eroded-------------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
482B:					
Uniontown-----------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 17a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel: Rating class	Value	Potential as source of sand: Rating class	Value
482B2:					
Uniontown, eroded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
482C2:					
Uniontown, eroded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
482C3:					
Uniontown, severely eroded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
483A:					
Henshaw	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
484A:					
Harco	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
585F:					
Negley	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
630C3:					
Navlys, severely eroded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
630D3:					
Navlys, severely eroded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
750A:					
Skelton	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
750B:					
Skelton	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
750C2:					
Skelton, eroded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 17a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel: Rating class	Value	Potential as source of sand: Rating class	Value
751A:					
Crawleyville--------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
784F:					
Berks---------------	90	Fair		Poor	
		Thickest layer	0.01	Bottom layer	0.00
		Bottom layer	0.02	Thickest layer	0.00
802B:					
Orthents, loamy-----	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
865:					
Pits, gravel--------	90	Not rated		Not rated	
898G:					
Sylvan--------------	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Hickory-------------	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
908G:					
Kell----------------	55	Fair		Poor	
		Bottom layer	0.01	Bottom layer	0.00
		Thickest layer	0.01	Thickest layer	0.00
Hickory-------------	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
929D3:					
Hickory, severely eroded-------------	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Ava, severely eroded	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
1288A:					
Petrolia, undrained, frequently flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
3092A:					
Sarpy, frequently flooded------------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.04
		Thickest layer	0.00	Bottom layer	0.51

Table 17a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel: Rating class	Value	Potential as source of sand: Rating class	Value
3103L:					
Houghton, frequently flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
3108A:					
Bonnie, frequently flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
3142A:					
Patton, frequently flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
3178A:					
Ruark, frequently flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
3231A:					
Evansville, frequently flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
3302A:					
Ambraw, frequently flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
3304A:					
Landes, frequently flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
3331A:					
Haymond, frequently flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
3333A:					
Wakeland, frequently flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
3382A:					
Belknap, frequently flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 17a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
3420A:					
Piopolis, frequently flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
3465A:					
Montgomery, frequently flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
3524A:					
Zipp, frequently flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
3597A:					
Armiesburg, frequently flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
3601A:					
Nolin, frequently flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
3602A:					
Newark, frequently flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
3665A:					
Stonelick, frequently flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7087A:					
Dickinson, rarely flooded	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.31
7109A:					
Racoon, rarely flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7131A:					
Alvin, rarely flooded	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.03
		Thickest layer	0.00	Bottom layer	0.25

Table 17a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
7131B:					
Alvin, rarely flooded	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.03
		Thickest layer	0.00	Bottom layer	0.25
7142A:					
Patton, rarely flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7142A+:					
Patton, rarely flooded, overwash	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7173A:					
McGary, rarely flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7173B2:					
McGary, rarely flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7176A:					
Marissa, rarely flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7178A:					
Ruark, rarely flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7184A:					
Roby, rarely flooded	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.04
		Thickest layer	0.00	Bottom layer	0.10
7208A:					
Sexton, rarely flooded	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.08
7434A:					
Ridgway, rarely flooded	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.08

Table 17a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
7434B:					
Ridgway, rarely flooded	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.08
7436A:					
Meadowbank, rarely flooded	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.10
7445A:					
Newhaven, rarely flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7446A:					
Springerton, rarely flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7462A:					
Sciotoville, rarely flooded	95	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7462B:					
Sciotoville, rarely flooded	95	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7465A:					
Montgomery, rarely flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7467B2:					
Markland, rarely flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7467C2:					
Markland, rarely flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7482B:					
Uniontown, rarely flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 17a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
7482C2:					
Uniontown, rarely flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7483A:					
Henshaw, rarely flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7484A:					
Harco, rarely flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7524A:					
Zipp, rarely flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7524A+:					
Zipp, rarely flooded, overwash	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7750A:					
Skelton, rarely flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7750B:					
Skelton, rarely flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7750C2:					
Skelton, rarely flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7751A:					
Crawleyville, rarely flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7787A:					
Banlic, rarely flooded	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 17a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
7812E:					
Typic Hapludalfs, rarely flooded-----	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
8072A:					
Sharon, occasionally flooded------------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
8460A:					
Ginat, occasionally flooded------------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 17b.--Construction Materials

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
2A:							
Cisne	90	Fair		Poor		Poor	
		Too clayey	0.02	Wetness	0.00	Wetness	0.00
		Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.01
		Water erosion	0.37	Shrink-swell	0.71	Too acid	0.95
		Too acid	0.46				
3A:							
Hoyleton	90	Fair		Poor		Fair	
		Too clayey	0.02	Low strength	0.00	Too clayey	0.01
		Low content of organic matter	0.02	Shrink-swell	0.46	Wetness	0.50
		Too acid	0.50	Wetness	0.50	Too acid	0.88
		Water erosion	0.68				
3B:							
Hoyleton	90	Fair		Poor		Fair	
		Too clayey	0.02	Low strength	0.00	Too clayey	0.01
		Low content of organic matter	0.02	Shrink-swell	0.46	Wetness	0.50
		Too acid	0.50	Wetness	0.50	Too acid	0.88
		Water erosion	0.68				
8D2:							
Hickory, eroded	90	Fair		Poor		Fair	
		Low content of organic matter	0.18	Low strength	0.00	Slope	0.04
		Too acid	0.68	Shrink-swell	0.97	Too clayey	0.58
		Too clayey	0.98				
8F:							
Hickory	90	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Too acid	0.26	Shrink-swell	0.99	Too clayey	0.55
		Too clayey	0.98				
		Water erosion	0.99				
12A:							
Wynoose	90	Poor		Poor		Poor	
		Too clayey	0.00	Wetness	0.00	Wetness	0.00
		Low content of organic matter	0.05	Low strength	0.00	Too clayey	0.00
		Too acid	0.08	Shrink-swell	0.81	Too acid	0.50
		Water erosion	0.37				
13A:							
Bluford	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.05	Wetness	0.04	Wetness	0.04
		Too acid	0.50	Shrink-swell	0.82	Too acid	0.68
		Water erosion	0.68				

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
13B:							
Bluford-------------	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.05	Wetness	0.04	Wetness	0.04
		Too acid	0.50	Shrink-swell	0.82	Too acid	0.68
		Water erosion	0.68				
13B2:							
Bluford, eroded-----	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.05	Wetness	0.04	Wetness	0.04
		Too acid	0.50	Shrink-swell	0.64	Too acid	0.68
		Water erosion	0.90				
14B:							
Ava-----------------	90	Fair		Poor		Fair	
		Low content of organic matter	0.24	Low strength	0.00	Too clayey	0.60
		Too acid	0.32	Wetness	0.91	Too acid	0.88
		Water erosion	0.68			Wetness	0.91
		Depth to cemented pan	0.94			Depth to cemented pan	0.94
		Too clayey	0.98				
14B2:							
Ava, eroded---------	90	Fair		Poor		Fair	
		Too acid	0.32	Low strength	0.00	Depth to cemented pan	0.36
		Depth to cemented pan	0.36	Shrink-swell	0.90	Too clayey	0.64
		Low content of organic matter	0.50	Wetness	0.91	Too acid	0.88
		Droughty	0.89			Wetness	0.91
		Water erosion	0.90				
		Too clayey	0.98				
14C2:							
Ava, eroded---------	90	Fair		Poor		Fair	
		Too acid	0.32	Low strength	0.00	Depth to cemented pan	0.36
		Depth to cemented pan	0.36	Shrink-swell	0.90	Too clayey	0.64
		Low content of organic matter	0.50	Wetness	0.91	Too acid	0.88
		Droughty	0.89			Wetness	0.91
		Water erosion	0.90				
		Too clayey	0.98				
14C3:							
Ava, severely eroded	90	Fair		Poor		Fair	
		Too acid	0.32	Low strength	0.00	Depth to cemented pan	0.36
		Depth to cemented pan	0.36	Shrink-swell	0.87	Too clayey	0.64
		Low content of organic matter	0.50	Wetness	0.91	Too acid	0.88
		Droughty	0.78			Wetness	0.91
		Water erosion	0.90				
		Too clayey	0.98				

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
15B:							
Parke---------------	90	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Too acid	0.99
		Too acid	0.61				
		Water erosion	0.68				
15C2:							
Parke, eroded-------	90	Fair		Good		Fair	
		Low content of organic matter	0.12			Too acid	0.99
		Too acid	0.61				
		Water erosion	0.68				
15D2:							
Parke, eroded-------	90	Fair		Good		Fair	
		Low content of organic matter	0.12			Slope	0.04
						Too acid	0.99
		Too acid	0.61				
		Water erosion	0.68				
19F:							
Sylvan--------------	90	Fair		Poor		Poor	
		Low content of organic matter	0.24	Slope	0.00	Slope	0.00
				Low strength	0.00	Too clayey	0.60
		Water erosion	0.68				
		Too clayey	0.98				
53B:							
Bloomfield----------	90	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00				
		Low content of organic matter	0.50				
		Too acid	0.97				
53C:							
Bloomfield----------	90	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00				
		Low content of organic matter	0.50				
		Too acid	0.97				
53D:							
Bloomfield----------	90	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00			Slope	0.04
		Low content of organic matter	0.50				
		Too acid	0.97				
75B:							
Drury---------------	90	Fair		Fair		Good	
		Low content of organic matter	0.02	Low strength	0.78		
		Water erosion	0.68				

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
87A:							
Dickinson	90	Fair		Good		Good	
		Low content of organic matter	0.12				
		Too acid	0.84				
		Droughty	0.96				
87B:							
Dickinson	90	Fair		Good		Good	
		Low content of organic matter	0.12				
		Too acid	0.84				
		Droughty	0.96				
109A:							
Racoon	90	Fair		Poor		Poor	
		Low content of organic matter	0.12	Wetness	0.00	Wetness	0.00
				Low strength	0.00		
		Too acid	0.32	Shrink-swell	0.99		
		Water erosion	0.68				
131A:							
Alvin	90	Fair		Good		Good	
		Low content of organic matter	0.05				
		Too acid	0.88				
131B:							
Alvin	90	Fair		Good		Good	
		Low content of organic matter	0.05				
		Too acid	0.88				
131C:							
Alvin	90	Fair		Good		Good	
		Low content of organic matter	0.05				
		Too acid	0.88				
131F:							
Alvin	90	Fair		Poor		Poor	
		Low content of organic matter	0.05	Slope	0.00	Slope	0.00
		Too acid	0.88				
142A:							
Patton	90	Fair		Poor		Poor	
		Low content of organic matter	0.12	Wetness	0.00	Wetness	0.00
				Low strength	0.00	Too clayey	0.87
		Water erosion	0.90	Shrink-swell	0.87		
		Too clayey	0.92				
142A+:							
Patton, overwash	90	Fair		Poor		Poor	
		Low content of organic matter	0.12	Wetness	0.00	Wetness	0.00
				Low strength	0.00	Too clayey	0.87
		Water erosion	0.90	Shrink-swell	0.92		
		Too clayey	0.92				

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
164A:							
Stoy----------------	90	Fair		Poor		Fair	
		Low content of organic matter	0.08	Low strength	0.00	Wetness	0.53
		Too acid	0.32	Wetness	0.53	Too clayey	0.64
		Water erosion	0.90	Shrink-swell	0.90	Too acid	0.88
		Too clayey	0.98				
164B:							
Stoy----------------	90	Fair		Poor		Fair	
		Low content of organic matter	0.08	Low strength	0.00	Wetness	0.53
		Too acid	0.32	Wetness	0.53	Too clayey	0.64
		Water erosion	0.90	Shrink-swell	0.90	Too acid	0.88
		Too clayey	0.98				
165A:							
Weir----------------	90	Poor		Poor		Poor	
		Low content of organic matter	0.00	Wetness	0.00	Wetness	0.00
		Too clayey	0.08	Low strength	0.00	Too clayey	0.04
		Water erosion	0.37	Shrink-swell	0.68	Too acid	0.88
		Too acid	0.50				
173A:							
McGary--------------	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.50	Wetness	0.53	Wetness	0.53
		Water erosion	0.90	Shrink-swell	0.89		
173B2:							
McGary, eroded------	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.50	Wetness	0.53	Wetness	0.53
		Water erosion	0.90	Shrink-swell	0.87		
176A:							
Marissa-------------	90	Fair		Poor		Fair	
		Too clayey	0.92	Low strength	0.00	Wetness	0.53
		Water erosion	0.99	Wetness	0.53	Too clayey	0.72
				Shrink-swell	0.87		
178A:							
Ruark---------------	90	Fair		Poor		Poor	
		Low content of organic matter	0.03	Wetness	0.00	Wetness	0.00
		Too acid	0.26			Too acid	0.82
184A:							
Roby----------------	90	Fair		Fair		Fair	
		Low content of organic matter	0.02	Wetness	0.53	Too sandy	0.08
		Too sandy	0.08			Wetness	0.53
		Too acid	0.92				

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
208A:							
Sexton	90	Poor		Poor		Poor	
		Too clayey	0.00	Wetness	0.00	Wetness	0.00
		Low content of organic matter	0.05	Shrink-swell	0.78	Too clayey	0.00
		Water erosion	0.37			Too acid	0.98
		Too acid	0.54				
214B:							
Hosmer	90	Fair		Poor		Fair	
		Too acid	0.32	Low strength	0.00	Depth to cemented pan	0.36
		Depth to cemented pan	0.36	Shrink-swell	0.87	Too acid	0.88
		Low content of organic matter	0.50	Wetness	0.91	Wetness	0.91
		Water erosion	0.90				
		Droughty	0.99				
214B2:							
Hosmer, eroded	90	Fair		Fair		Fair	
		Depth to cemented pan	0.14	Low strength	0.22	Depth to cemented pan	0.14
		Too acid	0.32	Shrink-swell	0.87	Too acid	0.88
		Low content of organic matter	0.50	Wetness	0.91	Wetness	0.91
		Droughty	0.84				
		Water erosion	0.90				
214C2:							
Hosmer, eroded	90	Fair		Poor		Fair	
		Depth to cemented pan	0.14	Low strength	0.00	Depth to cemented pan	0.14
		Too acid	0.32	Shrink-swell	0.87	Too acid	0.88
		Low content of organic matter	0.50	Wetness	0.91	Wetness	0.91
		Droughty	0.84				
		Water erosion	0.90				
214C3:							
Hosmer, severely eroded	90	Fair		Poor		Fair	
		Depth to cemented pan	0.05	Low strength	0.00	Depth to cemented pan	0.05
		Too acid	0.32	Shrink-swell	0.87	Too acid	0.88
		Low content of organic matter	0.50	Wetness	0.91	Wetness	0.91
		Droughty	0.62				
		Water erosion	0.90				
231A:							
Evansville	90	Fair		Poor		Poor	
		Low content of organic matter	0.88	Wetness	0.00	Wetness	0.00
		Water erosion	0.90	Low strength	0.00		
				Shrink-swell	0.87		

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
301B:							
Grantsburg----------	90	Fair		Poor		Fair	
		Low content of organic matter	0.02	Low strength	0.00	Too acid	0.59
		Too acid	0.12	Wetness	0.91	Wetness	0.91
		Water erosion	0.90			Depth to cemented pan	0.99
		Depth to cemented pan	0.99				
308B:							
Alford--------------	90	Fair		Fair		Fair	
		Low content of organic matter	0.12	Shrink-swell	0.98	Too acid	0.92
		Too acid	0.39				
		Water erosion	0.90				
308B2:							
Alford, eroded------	90	Fair		Fair		Fair	
		Low content of organic matter	0.12			Too acid	0.92
		Water erosion	0.37				
		Too acid	0.50				
308C2:							
Alford, eroded------	90	Fair		Fair		Fair	
		Low content of organic matter	0.12	Shrink-swell	0.98	Too acid	0.92
		Too acid	0.39				
		Water erosion	0.90				
308C3:							
Alford, severely eroded------------	90	Fair		Fair		Fair	
		Low content of organic matter	0.12	Shrink-swell	0.98	Too acid	0.92
		Too acid	0.39				
		Water erosion	0.90				
308D2:							
Alford, eroded------	90	Fair		Fair		Fair	
		Low content of organic matter	0.12	Shrink-swell	0.98	Slope	0.04
		Too acid	0.39			Too acid	0.92
		Water erosion	0.90				
308D3:							
Alford, severely eroded------------	90	Fair		Fair		Fair	
		Low content of organic matter	0.12	Shrink-swell	0.98	Slope	0.04
		Too acid	0.39			Too acid	0.92
		Water erosion	0.90				
337A:							
Creal---------------	90	Fair		Poor		Fair	
		Low content of organic matter	0.02	Low strength	0.00	Wetness	0.50
		Too acid	0.32	Wetness	0.50		
		Water erosion	0.68	Shrink-swell	0.99		

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
339F:							
Wellston------------	90	Fair		Poor		Poor	
		Too acid	0.54	Slope	0.00	Slope	0.00
		Low content of organic matter	0.88	Low strength	0.22	Hard to reclaim (rock fragments)	0.03
		Water erosion	0.90			Rock fragments	0.41
						Too acid	0.98
340C2:							
Zanesville, eroded--	90	Poor		Poor		Poor	
		Depth to cemented pan	0.00	Low strength	0.00	Depth to cemented pan	0.00
				Wetness	0.91		
		Droughty	0.17	Depth to bedrock	0.98	Wetness	0.91
		Too acid	0.54			Too acid	0.98
		Water erosion	0.90				
340C3:							
Zanesville, severely eroded-------------	90	Poor		Poor		Poor	
		Depth to cemented pan	0.00	Low strength	0.00	Depth to cemented pan	0.00
				Shrink-swell	0.87		
		Low content of organic matter	0.08	Wetness	0.91	Wetness	0.91
				Depth to bedrock	0.92	Too acid	0.98
		Droughty	0.16				
		Too acid	0.54				
		Water erosion	0.90				
340D2:							
Zanesville, eroded--	90	Poor		Poor		Poor	
		Depth to cemented pan	0.00	Low strength	0.00	Depth to cemented pan	0.00
				Wetness	0.91		
		Droughty	0.17	Depth to bedrock	0.98	Slope	0.04
		Too acid	0.54			Wetness	0.91
		Water erosion	0.90			Too acid	0.98
340D3:							
Zanesville, severely eroded-------------	90	Poor		Poor		Poor	
		Depth to cemented pan	0.00	Low strength	0.00	Depth to cemented pan	0.00
				Shrink-swell	0.87		
		Low content of organic matter	0.08	Wetness	0.91	Slope	0.04
				Depth to bedrock	0.92	Wetness	0.91
		Droughty	0.16			Too acid	0.98
		Too acid	0.54				
		Water erosion	0.90				
434A:							
Ridgway-------------	90	Fair		Fair		Fair	
		Low content of organic matter	0.02	Shrink-swell	0.99	Too clayey	0.76
		Too acid	0.68				
		Water erosion	0.90				
		Too clayey	0.98				

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
434B:							
Ridgway	90	Fair		Fair		Fair	
		Low content of organic matter	0.02	Shrink-swell	0.99	Too clayey	0.76
		Too acid	0.68				
		Water erosion	0.90				
		Too clayey	0.98				
434C2:							
Ridgway, eroded	90	Fair		Fair		Fair	
		Low content of organic matter	0.02	Shrink-swell	0.99	Too clayey	0.76
		Too acid	0.68				
		Water erosion	0.90				
		Too clayey	0.98				
436A:							
Meadowbank	90	Fair		Fair		Good	
		Low content of organic matter	0.12	Shrink-swell	0.99		
		Too acid	0.88				
436B:							
Meadowbank	90	Fair		Fair		Good	
		Low content of organic matter	0.12	Shrink-swell	0.99		
		Too acid	0.88				
445A:							
Newhaven	90	Fair		Fair		Fair	
		Low content of organic matter	0.18	Wetness	0.53	Wetness	0.53
						Too clayey	0.72
		Too acid	0.88				
		Too clayey	0.92				
446A:							
Springerton	90	Fair		Poor		Poor	
		Low content of organic matter	0.50	Wetness	0.00	Wetness	0.00
				Low strength	0.78		
		Too acid	0.97				
453B:							
Muren	90	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Wetness	0.18
				Wetness	0.18		
		Water erosion	0.68	Shrink-swell	0.97		
		Too acid	0.74				
467B2:							
Markland, eroded	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.75	Shrink-swell	0.87		
		Too acid	0.88				
		Water erosion	0.90				

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
467C2:							
Markland, eroded----	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.75	Shrink-swell	0.87		
		Too acid	0.88				
		Water erosion	0.90				
467C3:							
Markland, severely eroded-------------	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.75	Shrink-swell	0.87		
		Too acid	0.88				
		Water erosion	0.90				
482B:							
Uniontown-----------	90	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Wetness	0.98
		Too acid	0.84	Wetness	0.98		
		Water erosion	0.90				
482B2:							
Uniontown, eroded---	90	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Wetness	0.98
		Water erosion	0.90	Wetness	0.98		
		Too acid	0.97				
482C2:							
Uniontown, eroded---	90	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Wetness	0.98
		Water erosion	0.90	Wetness	0.98		
		Too acid	0.97				
482C3:							
Uniontown, severely eroded-------------	90	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Wetness	0.98
		Too acid	0.84	Wetness	0.98		
		Water erosion	0.99				
483A:							
Henshaw-------------	90	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Wetness	0.12
		Water erosion	0.68	Wetness	0.12		
		Too acid	0.84				
484A:							
Harco---------------	90	Fair		Fair		Fair	
		Low content of organic matter	0.88	Wetness	0.53	Wetness	0.53
				Low strength	0.78		
				Shrink-swell	0.87		

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
585F:							
Negley	90	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Too acid	0.50			Too acid	0.95
630C3:							
Navlys, severely eroded	90	Fair		Good		Fair	
		Low content of organic matter	0.02			Too clayey	0.65
		Water erosion	0.06				
		Carbonate content	0.32				
		Too acid	0.84				
		Too clayey	0.99				
630D3:							
Navlys, severely eroded	90	Fair		Good		Poor	
		Low content of organic matter	0.02			Slope	0.00
		Water erosion	0.06			Too clayey	0.65
		Carbonate content	0.32				
		Too acid	0.84				
		Too clayey	0.99				
750A:							
Skelton	90	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.68
		Too acid	0.50			Too acid	0.88
		Too clayey	0.98				
750B:							
Skelton	90	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.68
		Too acid	0.50			Too acid	0.88
		Too clayey	0.98				
750C2:							
Skelton, eroded	90	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.68
		Too acid	0.50			Too acid	0.88
		Too clayey	0.98				
751A:							
Crawleyville	90	Fair		Poor		Poor	
		Low content of organic matter	0.50	Wetness	0.00	Wetness	0.00
		Too acid	0.68				
784F:							
Berks	90	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Low content of organic matter	0.12	Slope	0.00	Rock fragments	0.00
		Too acid	0.54			Depth to bedrock	0.58
		Depth to bedrock	0.58			Too acid	0.98

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
802B:							
Orthents, loamy-----	90	Fair		Poor		Good	
		Low content of organic matter	0.18	Low strength	0.00		
865:							
Pits, gravel--------	90	Not rated		Not rated		Not rated	
898G:							
Sylvan--------------	45	Fair		Poor		Poor	
		Low content of organic matter	0.24	Slope	0.00	Slope	0.00
				Low strength	0.00	Too clayey	0.60
		Water erosion	0.68				
		Too clayey	0.98				
Hickory-------------	40	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Low strength	0.78	Too clayey	0.55
		Too acid	0.46	Shrink-swell	0.99	Rock fragments	0.92
		Too clayey	0.98				
		Water erosion	0.99				
908G:							
Kell----------------	55	Fair		Poor		Poor	
		Low content of organic matter	0.08	Slope	0.00	Slope	0.00
				Depth to bedrock	0.00	Rock fragments	0.00
		Too acid	0.50			Too acid	0.88
		Droughty	0.90			Depth to bedrock	0.90
		Depth to bedrock	0.90				
		Water erosion	0.99				
Hickory-------------	35	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Shrink-swell	0.99	Too clayey	0.55
		Too acid	0.26				
		Too clayey	0.98				
		Water erosion	0.99				
929D3:							
Hickory, severely eroded------------	55	Fair		Poor		Fair	
		Low content of organic matter	0.18	Low strength	0.00	Slope	0.04
				Shrink-swell	0.97	Too clayey	0.58
		Too acid	0.68				
		Too clayey	0.98				
Ava, severely eroded	35	Fair		Poor		Fair	
		Too acid	0.32	Low strength	0.00	Slope	0.04
		Depth to cemented pan	0.36	Shrink-swell	0.87	Depth to cemented pan	0.36
				Wetness	0.91		
		Low content of organic matter	0.50			Too clayey	0.64
						Too acid	0.88
		Droughty	0.78			Wetness	0.91
		Water erosion	0.90				
		Too clayey	0.98				

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
1288A:							
Petrolia, undrained, frequently flooded	90	Fair		Poor		Poor	
		Low content of organic matter	0.68	Wetness	0.00	Wetness	0.00
				Low strength	0.00	Too clayey	0.67
		Too clayey	0.98	Shrink-swell	0.87		
3092A:							
Sarpy, frequently flooded------------	90	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Low content of organic matter	0.12				
		Droughty	0.35				
3103L:							
Houghton, frequently flooded------------	90	Poor		Poor		Not rated	
		Wind erosion	0.00	Wetness	0.00		
3108A:							
Bonnie, frequently flooded------------	90	Fair		Poor		Poor	
		Too acid	0.50	Wetness	0.00	Wetness	0.00
		Low content of organic matter	0.50	Low strength	0.00	Too acid	0.88
		Water erosion	0.68				
3142A:							
Patton, frequently flooded------------	90	Fair		Poor		Poor	
		Low content of organic matter	0.12	Wetness	0.00	Wetness	0.00
				Low strength	0.00	Too clayey	0.87
		Water erosion	0.90	Shrink-swell	0.87		
		Too clayey	0.92				
3178A:							
Ruark, frequently flooded------------	90	Fair		Poor		Poor	
		Low content of organic matter	0.03	Wetness	0.00	Wetness	0.00
						Too acid	0.82
		Too acid	0.26				
3231A:							
Evansville, frequently flooded	90	Fair		Poor		Poor	
		Low content of organic matter	0.88	Wetness	0.00	Wetness	0.00
				Low strength	0.00		
		Water erosion	0.90	Shrink-swell	0.87		
3302A:							
Ambraw, frequently flooded------------	90	Fair		Poor		Poor	
		Low content of organic matter	0.50	Wetness	0.00	Wetness	0.00
				Shrink-swell	0.87	Too clayey	0.64
		Too acid	0.95				
		Too clayey	0.98				

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
3304A:							
Landes, frequently flooded	90	Good		Good		Good	
3331A:							
Haymond, frequently flooded	90	Fair		Good		Good	
		Water erosion	0.68				
3333A:							
Wakeland, frequently flooded	90	Fair		Fair		Fair	
		Low content of organic matter	0.50	Wetness	0.04	Wetness	0.04
		Water erosion	0.68				
3382A:							
Belknap, frequently flooded	90	Fair		Fair		Fair	
		Too acid	0.46	Wetness	0.04	Wetness	0.04
		Water erosion	0.68			Too acid	0.95
3420A:							
Piopolis, frequently flooded	90	Fair		Poor		Poor	
		Too acid	0.50	Wetness	0.00	Wetness	0.00
		Too clayey	0.92	Low strength	0.00	Too clayey	0.72
				Shrink-swell	0.87	Too acid	0.88
3465A:							
Montgomery, frequently flooded	90	Poor		Poor		Poor	
		Too clayey	0.00	Wetness	0.00	Wetness	0.00
				Low strength	0.00	Too clayey	0.00
				Shrink-swell	0.43		
3524A:							
Zipp, frequently flooded	90	Poor		Poor		Poor	
		Too clayey	0.00	Wetness	0.00	Wetness	0.00
		Too acid	0.95	Low strength	0.00	Too clayey	0.00
				Shrink-swell	0.12		
3597A:							
Armiesburg, frequently flooded	90	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Too clayey	0.66
		Too clayey	0.92	Shrink-swell	0.87		
3601A:							
Nolin, frequently flooded	90	Fair		Poor		Good	
		Water erosion	0.90	Low strength	0.00		

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
3602A:							
Newark, frequently flooded-----------	90	Fair		Poor		Poor	
		Low content of organic matter	0.68	Wetness	0.00	Wetness	0.00
				Low strength	0.00		
		Too acid	0.84				
		Water erosion	0.90				
3665A:							
Stonelick, frequently flooded	90	Fair		Good		Fair	
		Low content of organic matter	0.88			Rock fragments	0.88
7087A:							
Dickinson, rarely flooded-----------	90	Fair		Good		Good	
		Low content of organic matter	0.12				
		Too acid	0.84				
		Droughty	0.96				
7109A:							
Racoon, rarely flooded-----------	90	Fair		Poor		Poor	
		Low content of organic matter	0.12	Wetness	0.00	Wetness	0.00
				Low strength	0.00		
		Too acid	0.32	Shrink-swell	0.99		
		Water erosion	0.68				
7131A:							
Alvin, rarely flooded-----------	90	Fair		Good		Good	
		Low content of organic matter	0.05				
		Too acid	0.88				
7131B:							
Alvin, rarely flooded-----------	90	Fair		Good		Good	
		Low content of organic matter	0.05				
		Too acid	0.88				
7142A:							
Patton, rarely flooded-----------	90	Fair		Poor		Poor	
		Low content of organic matter	0.12	Wetness	0.00	Wetness	0.00
				Low strength	0.00	Too clayey	0.87
		Water erosion	0.90	Shrink-swell	0.87		
		Too clayey	0.92				
7142A+:							
Patton, rarely flooded, overwash--	90	Fair		Poor		Poor	
		Low content of organic matter	0.12	Wetness	0.00	Wetness	0.00
				Low strength	0.00	Too clayey	0.87
		Water erosion	0.90	Shrink-swell	0.92		
		Too clayey	0.92				

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
7173A:							
McGary, rarely flooded	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.50	Wetness	0.53	Wetness	0.53
				Shrink-swell	0.89		
		Water erosion	0.90				
7173B2:							
McGary, rarely flooded	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.50	Wetness	0.53	Wetness	0.53
				Shrink-swell	0.87		
		Water erosion	0.90				
7176A:							
Marissa, rarely flooded	90	Fair		Poor		Fair	
		Too clayey	0.92	Low strength	0.00	Wetness	0.53
		Water erosion	0.99	Wetness	0.53	Too clayey	0.72
				Shrink-swell	0.87		
7178A:							
Ruark, rarely flooded	90	Fair		Poor		Poor	
		Low content of organic matter	0.03	Wetness	0.00	Wetness	0.00
						Too acid	0.82
		Too acid	0.26				
7184A:							
Roby, rarely flooded	90	Fair		Fair		Fair	
		Low content of organic matter	0.02	Wetness	0.53	Too sandy	0.08
						Wetness	0.53
		Too sandy	0.08				
		Too acid	0.92				
7208A:							
Sexton, rarely flooded	90	Poor		Poor		Poor	
		Too clayey	0.00	Wetness	0.00	Wetness	0.00
		Low content of organic matter	0.05	Shrink-swell	0.78	Too clayey	0.00
						Too acid	0.98
		Water erosion	0.37				
		Too acid	0.54				
7434A:							
Ridgway, rarely flooded	90	Fair		Fair		Fair	
		Low content of organic matter	0.02	Shrink-swell	0.99	Too clayey	0.76
		Too acid	0.68				
		Water erosion	0.90				
		Too clayey	0.98				

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
7434B:							
Ridgway, rarely flooded	90	Fair		Fair		Fair	
		Low content of organic matter	0.02	Shrink-swell	0.99	Too clayey	0.76
		Too acid	0.68				
		Water erosion	0.90				
		Too clayey	0.98				
7436A:							
Meadowbank, rarely flooded	90	Fair		Good		Good	
		Low content of organic matter	0.12				
		Too acid	0.88				
7445A:							
Newhaven, rarely flooded	90	Fair		Fair		Fair	
		Low content of organic matter	0.18	Wetness	0.53	Wetness	0.53
						Too clayey	0.72
		Too acid	0.88				
		Too clayey	0.92				
7446A:							
Springerton, rarely flooded	90	Fair		Poor		Poor	
		Low content of organic matter	0.50	Wetness	0.00	Wetness	0.00
				Low strength	0.78		
		Too acid	0.97				
7462A:							
Sciotoville, rarely flooded	95	Fair		Fair		Fair	
		Low content of organic matter	0.12	Wetness	0.76	Wetness	0.76
				Shrink-swell	0.98	Too acid	0.88
		Too acid	0.32				
		Water erosion	0.99				
7462B:							
Sciotoville, rarely flooded	95	Fair		Fair		Fair	
		Low content of organic matter	0.12	Wetness	0.76	Wetness	0.76
				Shrink-swell	0.98	Too acid	0.88
		Too acid	0.32				
		Water erosion	0.99				
7465A:							
Montgomery, rarely flooded	90	Poor		Poor		Poor	
		Too clayey	0.00	Wetness	0.00	Wetness	0.00
				Low strength	0.00	Too clayey	0.00
				Shrink-swell	0.43		

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
7467B2:							
Markland, rarely flooded	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.75	Shrink-swell	0.87		
		Too acid	0.88				
		Water erosion	0.90				
7467C2:							
Markland, rarely flooded	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.75	Shrink-swell	0.87		
		Too acid	0.88				
		Water erosion	0.90				
7482B:							
Uniontown, rarely flooded	90	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Wetness	0.98
				Wetness	0.98		
		Too acid	0.84				
		Water erosion	0.90				
7482C2:							
Uniontown, rarely flooded	90	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Wetness	0.98
				Wetness	0.98		
		Water erosion	0.90				
		Too acid	0.97				
7483A:							
Henshaw, rarely flooded	90	Fair		Poor		Poor	
		Low content of organic matter	0.12	Wetness	0.00	Wetness	0.00
				Low strength	0.00		
		Water erosion	0.68				
		Too acid	0.84				
7484A:							
Harco, rarely flooded	90	Fair		Fair		Fair	
		Low content of organic matter	0.88	Wetness	0.12	Wetness	0.12
				Low strength	0.78		
				Shrink-swell	0.87		
7524A:							
Zipp, rarely flooded	90	Poor		Poor		Poor	
		Too clayey	0.00	Wetness	0.00	Wetness	0.00
		Too acid	0.95	Low strength	0.00	Too clayey	0.00
				Shrink-swell	0.12		

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
7524A+:							
Zipp, rarely flooded, overwash--	90	Poor		Poor		Poor	
		Too clayey	0.00	Wetness	0.00	Wetness	0.00
		Water erosion	0.99	Low strength	0.00	Too clayey	0.00
				Shrink-swell	0.31		
7750A:							
Skelton, rarely flooded-----------	90	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.68
		Too acid	0.50			Too acid	0.88
		Too clayey	0.98				
7750B:							
Skelton, rarely flooded-----------	90	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.68
		Too acid	0.50			Too acid	0.88
		Too clayey	0.98				
7750C2:							
Skelton, rarely flooded-----------	90	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.68
		Too acid	0.50			Too acid	0.88
		Too clayey	0.98				
7751A:							
Crawleyville, rarely flooded-----------	90	Fair		Poor		Poor	
		Low content of organic matter	0.50	Wetness	0.00	Wetness	0.00
		Too acid	0.68				
7787A:							
Banlic, rarely flooded-----------	90	Fair		Fair		Fair	
		Low content of organic matter	0.18	Wetness	0.04	Wetness	0.04
		Too acid	0.32			Too acid	0.88
		Water erosion	0.68				
7812E:							
Typic Hapludalfs, rarely flooded-----	90	Fair		Fair		Poor	
		Low content of organic matter	0.50	Slope	0.82	Slope	0.00
		Water erosion	0.90	Shrink-swell	0.87	Rock fragments	0.92
		Too acid	0.97				

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
8072A:							
Sharon, occasionally flooded	90	Fair		Good		Fair	
		Low content of organic matter	0.24			Too acid	0.88
		Too acid	0.32				
		Water erosion	0.68				
8460A:							
Ginat, occasionally flooded	90	Fair		Poor		Poor	
		Low content of organic matter	0.12	Wetness	0.00	Wetness	0.00
		Too acid	0.32	Low strength	0.00		
		Water erosion	0.90	Shrink-swell	0.95		

Table 18a.--Water Management

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2A:							
Cisne	90	Not limited		Very limited		Very limited	
				Depth to saturated zone	1.00	Depth to water	1.00
				Piping	0.70		
3A:							
Hoyleton	90	Not limited		Very limited		Very limited	
				Depth to saturated zone	1.00	Slow refill	1.00
				Piping	0.43	Unstable excavation walls	0.10
3B:							
Hoyleton	90	Not limited		Very limited		Very limited	
				Depth to saturated zone	1.00	Slow refill	1.00
				Piping	0.43	Unstable excavation walls	0.10
8D2:							
Hickory, eroded	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.30	Depth to water	1.00
		Seepage	0.72				
8F:							
Hickory	90	Very limited		Very limited		Very limited	
		Slope	1.00	Piping	1.00	Depth to water	1.00
		Seepage	0.72				
12A:							
Wynoose	90	Somewhat limited		Very limited		Very limited	
		Seepage	0.04	Ponding	1.00	Depth to water	1.00
				Depth to saturated zone	1.00		
				Piping	0.35		
13A:							
Bluford	90	Somewhat limited		Very limited		Very limited	
		Seepage	0.04	Depth to saturated zone	1.00	Depth to water	1.00
				Piping	0.38		
13B:							
Bluford	90	Somewhat limited		Very limited		Very limited	
		Slope	0.08	Depth to saturated zone	1.00	Depth to water	1.00
		Seepage	0.04				
				Piping	0.38		
13B2:							
Bluford, eroded	90	Somewhat limited		Very limited		Very limited	
		Slope	0.08	Depth to saturated zone	1.00	Depth to water	1.00
				Piping	0.08		

Table 18a.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
14B:							
Ava	90	Somewhat limited		Very limited		Very limited	
		Depth to cemented pan	0.66	Piping	1.00	Depth to water	1.00
		Seepage	0.04	Depth to saturated zone	0.84		
				Thin layer	0.66		
14B2:							
Ava, eroded	90	Somewhat limited		Somewhat limited		Very limited	
		Depth to cemented pan	0.91	Thin layer	0.91	Depth to water	1.00
		Slope	0.08	Depth to saturated zone	0.84		
		Seepage	0.04	Piping	0.59		
14C2:							
Ava, eroded	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.91	Depth to water	1.00
		Depth to cemented pan	0.91	Depth to saturated zone	0.84		
		Seepage	0.04	Piping	0.59		
14C3:							
Ava, severely eroded	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.91	Depth to water	1.00
		Depth to cemented pan	0.91	Depth to saturated zone	0.84		
		Seepage	0.04	Piping	0.15		
15B:							
Parke	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Piping	0.07	Depth to water	1.00
		Slope	0.08				
15C2:							
Parke, eroded	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.51	Depth to water	1.00
		Seepage	0.72				
15D2:							
Parke, eroded	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.51	Depth to water	1.00
		Seepage	0.72				
19F:							
Sylvan	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.78	Depth to water	1.00
		Seepage	0.72				
53B:							
Bloomfield	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
53C:							
Bloomfield	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	1.00				

Table 18a.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
53D:							
Bloomfield	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	1.00				
75B:							
Drury	90	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Piping	1.00	Depth to water	1.00
		Slope	0.08				
87A:							
Dickinson	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
87B:							
Dickinson	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.02				
109A:							
Racoon	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.04	Ponding	1.00	Slow refill	0.96
				Depth to saturated zone	1.00	Unstable excavation walls	0.10
				Piping	0.63		
131A:							
Alvin	90	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
131B:							
Alvin	90	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
		Slope	0.08				
131C:							
Alvin	90	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
		Slope	1.00				
131F:							
Alvin	90	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
		Slope	1.00				
142A:							
Patton	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
				Ponding	1.00	Unstable excavation walls	0.10
				Piping	0.23		
142A+:							
Patton, overwash	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
				Ponding	1.00	Unstable excavation walls	0.10
				Piping	0.48		

Table 18a.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
164A:							
Stoy	90	Not limited		Somewhat limited		Very limited	
				Depth to saturated zone	1.00	Depth to water	1.00
				Piping	0.19		
164B:							
Stoy	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.08	Depth to saturated zone	1.00	Depth to water	1.00
				Piping	0.19		
165A:							
Weir	90	Not limited		Very limited		Very limited	
				Ponding	1.00	Depth to water	1.00
				Depth to saturated zone	1.00		
				Piping	0.73		
173A:							
McGary	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.02	Depth to saturated zone	1.00	Slow refill	0.98
						Unstable excavation walls	0.10
						Depth to saturated zone	0.01
173B2:							
McGary, eroded	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.02	Depth to saturated zone	1.00	Slow refill	0.98
						Unstable excavation walls	0.10
						Depth to saturated zone	0.01
176A:							
Marissa	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.54	Depth to saturated zone	1.00	Slow refill	0.46
				Piping	0.11	Unstable excavation walls	0.10
						Depth to saturated zone	0.01
178A:							
Ruark	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
				Piping	1.00	Unstable excavation walls	0.10
				Ponding	1.00		
184A:							
Roby	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Unstable excavation walls	1.00
				Seepage	0.28	Depth to saturated zone	0.01

Table 18a.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
208A:							
Sexton	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Ponding	1.00	Depth to water	1.00
				Depth to saturated zone	1.00		
				Piping	0.58		
214B:							
Hosmer	90	Somewhat limited		Very limited		Very limited	
		Depth to cemented pan	0.91	Piping	1.00	Depth to water	1.00
		Seepage	0.72	Thin layer	0.91		
		Slope	0.08	Depth to saturated zone	0.84		
214B2:							
Hosmer, eroded	90	Somewhat limited		Very limited		Very limited	
		Depth to cemented pan	0.97	Piping	1.00	Depth to water	1.00
		Seepage	0.72	Thin layer	0.97		
		Slope	0.08	Depth to saturated zone	0.84		
214C2:							
Hosmer, eroded	90	Very limited		Very limited		Very limited	
		Slope	1.00	Piping	1.00	Depth to water	1.00
		Depth to cemented pan	0.97	Thin layer	0.97		
		Seepage	0.72	Depth to saturated zone	0.84		
214C3:							
Hosmer, severely eroded	90	Very limited		Very limited		Very limited	
		Slope	1.00	Piping	1.00	Depth to water	1.00
		Depth to cemented pan	0.99	Thin layer	0.99		
		Seepage	0.72	Depth to saturated zone	0.84		
231A:							
Evansville	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
				Ponding	1.00	Unstable excavation walls	0.10
				Piping	0.01		
301B:							
Grantsburg	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Depth to saturated zone	0.84	Depth to water	1.00
		Depth to cemented pan	0.56	Piping	0.74		
		Slope	0.08	Thin layer	0.56		
308B:							
Alford	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Piping	0.91	Depth to water	1.00
		Slope	0.08				
308B2:							
Alford, eroded	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Piping	0.94	Depth to water	1.00
		Slope	0.08				

Table 18a.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
308C2:							
Alford, eroded------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.88	Depth to water	1.00
		Seepage	0.72				
308C3:							
Alford, severely eroded-------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.88	Depth to water	1.00
		Seepage	0.72				
308D2:							
Alford, eroded------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.88	Depth to water	1.00
		Seepage	0.72				
308D3:							
Alford, severely eroded-------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.88	Depth to water	1.00
		Seepage	0.72				
337A:							
Creal---------------	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.04	Depth to saturated zone	1.00	Slow refill	0.96
						Unstable excavation walls	0.10
				Piping	0.71		
339F:							
Wellston------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.99	Depth to water	1.00
		Seepage	0.72				
340C2:							
Zanesville, eroded--	90	Very limited		Very limited		Very limited	
		Depth to cemented pan	1.00	Thin layer	1.00	Depth to water	1.00
				Piping	0.97		
		Slope	1.00	Depth to saturated zone	0.84		
		Seepage	0.54				
		Depth to bedrock	0.01				
340C3:							
Zanesville, severely eroded-------------	90	Very limited		Very limited		Very limited	
		Depth to cemented pan	1.00	Thin layer	1.00	Depth to water	1.00
				Piping	0.96		
		Slope	1.00	Depth to saturated zone	0.84		
		Seepage	0.54				
		Depth to bedrock	0.02				
340D2:							
Zanesville, eroded--	90	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to cemented pan	1.00	Piping	0.97		
				Depth to saturated zone	0.84		
		Seepage	0.54				
		Depth to bedrock	0.01				

Table 18a.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
340D3:							
Zanesville, severely eroded	90	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to cemented pan	1.00	Piping	0.96		
				Depth to saturated zone	0.84		
		Seepage	0.54				
		Depth to bedrock	0.02				
434A:							
Ridgway	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.99	Depth to water	1.00
434B:							
Ridgway	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.99	Depth to water	1.00
		Slope	0.02				
434C2:							
Ridgway, eroded	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.98	Depth to water	1.00
		Slope	0.92				
436A:							
Meadowbank	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.96	Depth to water	1.00
436B:							
Meadowbank	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.96	Depth to water	1.00
445A:							
Newhaven	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Unstable excavation walls	1.00
				Piping	0.95	Depth to saturated zone	0.01
446A:							
Springerton	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
						Unstable excavation walls	0.10
				Ponding	1.00		
				Piping	1.00		
453B:							
Muren	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Unstable excavation walls	0.50
		Slope	0.08				
				Piping	0.99	Slow refill	0.28
467B2:							
Markland, eroded	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.08	Piping	0.10	Depth to water	1.00
		Seepage	0.04				
467C2:							
Markland, eroded	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.92	Piping	0.10	Depth to water	1.00
		Seepage	0.04				

Table 18a.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
467C3:							
Markland, severely eroded	90	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	0.04				
482B:							
Uniontown	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.72	Piping	0.88	Slow refill	0.28
				Depth to saturated zone	0.68	Depth to saturated zone	0.14
						Unstable excavation walls	0.10
482B2:							
Uniontown, eroded	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.72	Piping	0.87	Slow refill	0.28
				Depth to saturated zone	0.68	Depth to saturated zone	0.14
						Unstable excavation walls	0.10
482C2:							
Uniontown, eroded	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.92	Piping	0.87	Slow refill	0.28
		Seepage	0.72	Depth to saturated zone	0.68	Depth to saturated zone	0.14
						Unstable excavation walls	0.10
482C3:							
Uniontown, severely eroded	90	Very limited		Somewhat limited		Somewhat limited	
		Slope	1.00	Depth to saturated zone	0.68	Slow refill	0.28
		Seepage	0.72	Piping	0.67	Depth to saturated zone	0.14
						Unstable excavation walls	0.10
483A:							
Henshaw	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.04	Depth to saturated zone	1.00	Slow refill	0.96
				Piping	1.00	Unstable excavation walls	0.10
484A:							
Harco	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
				Piping	0.90	Unstable excavation walls	0.10
						Depth to saturated zone	0.01
585F:							
Negley	90	Very limited		Very limited		Very limited	
		Slope	1.00	Piping	1.00	Depth to water	1.00
		Seepage	0.72				

Table 18a.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
630C3:							
Navlys, severely eroded	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.98	Piping	0.09	Depth to water	1.00
		Seepage	0.72			Slow refill	0.28
630D3:							
Navlys, severely eroded	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.09	Depth to water	1.00
		Seepage	0.72			Slow refill	0.28
750A:							
Skelton	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Piping	0.67	Depth to water	1.00
750B:							
Skelton	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Piping	0.67	Depth to water	1.00
750C2:							
Skelton, eroded	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.92	Piping	0.62	Depth to water	1.00
		Seepage	0.72				
751A:							
Crawleyville	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
				Piping	1.00	Unstable excavation walls	0.10
784F:							
Berks	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.85	Depth to water	1.00
		Slope	1.00				
		Depth to bedrock	0.85				
802B:							
Orthents, loamy	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.04	Piping	0.18	Depth to water	1.00
865:							
Pits, gravel	90	Not rated		Not rated		Not rated	
898G:							
Sylvan	45	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.78	Depth to water	1.00
		Seepage	0.72				
Hickory	40	Very limited		Very limited		Very limited	
		Slope	1.00	Piping	1.00	Depth to water	1.00
		Seepage	0.72				
908G:							
Kell	55	Very limited		Very limited		Very limited	
		Slope	1.00	Piping	1.00	Depth to water	1.00
		Seepage	0.72	Thin layer	0.70		
		Depth to bedrock	0.04				

Table 18a.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
908G:							
Hickory	35	Very limited		Very limited		Very limited	
		Slope	1.00	Piping	1.00	Depth to water	1.00
		Seepage	0.72				
929D3:							
Hickory, severely eroded	55	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.01	Depth to water	1.00
		Seepage	0.72				
Ava, severely eroded	35	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.91	Depth to water	1.00
		Depth to cemented pan	0.91	Depth to saturated zone	0.84		
		Seepage	0.04	Piping	0.15		
1288A:							
Petrolia, undrained, frequently flooded	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.04	Depth to saturated zone	1.00	Slow refill	0.96
				Ponding	1.00	Unstable excavation walls	0.10
				Piping	0.05		
3092A:							
Sarpy, frequently flooded	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
3103L:							
Houghton, frequently flooded	90	Very limited		Not rated		Somewhat limited	
		Seepage	1.00			Unstable excavation walls	0.10
3108A:							
Bonnie, frequently flooded	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.04	Ponding	1.00	Slow refill	0.28
				Depth to saturated zone	1.00	Unstable excavation walls	0.10
				Piping	1.00		
3142A:							
Patton, frequently flooded	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
				Ponding	1.00	Unstable excavation walls	0.10
				Piping	0.23		
3178A:							
Ruark, frequently flooded	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
				Piping	1.00	Unstable excavation walls	0.10
				Ponding	1.00		

Table 18a.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3231A:							
Evansville, frequently flooded	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
				Ponding	1.00	Unstable excavation walls	0.10
				Piping	0.01		
3302A:							
Ambraw, frequently flooded-----------	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.04	Depth to saturated zone	1.00	Slow refill	0.28
				Ponding	1.00	Unstable excavation walls	0.10
				Piping	0.76		
3304A:							
Landes, frequently flooded-----------	90	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
3331A:							
Haymond, frequently flooded-----------	90	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Piping	1.00	Depth to water	1.00
3333A:							
Wakeland, frequently flooded-----------	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
				Piping	1.00	Unstable excavation walls	0.10
3382A:							
Belknap, frequently flooded-----------	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.54	Depth to saturated zone	1.00	Slow refill	0.46
				Piping	1.00	Unstable excavation walls	0.10
3420A:							
Piopolis, frequently flooded-----------	90	Not limited		Very limited		Very limited	
				Ponding	1.00	Slow refill	1.00
				Depth to saturated zone	1.00	Unstable excavation walls	0.10
3465A:							
Montgomery, frequently flooded	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.04	Depth to saturated zone	1.00	Slow refill	0.96
				Ponding	1.00	Unstable excavation walls	0.10

Table 18a.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3524A:							
Zipp, frequently flooded	90	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Slow refill	0.96
				Ponding	1.00	Unstable excavation walls	0.10
				Hard to pack	0.31		
3597A:							
Armiesburg, frequently flooded	90	Somewhat limited		Not limited		Very limited	
		Seepage	0.72			Depth to water	1.00
3601A:							
Nolin, frequently flooded	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Piping	0.41	Depth to water	1.00
3602A:							
Newark, frequently flooded	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
				Piping	0.19	Unstable excavation walls	0.10
3665A:							
Stonelick, frequently flooded	90	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
7087A:							
Dickinson, rarely flooded	90	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
7109A:							
Racoon, rarely flooded	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.04	Ponding	1.00	Slow refill	0.96
				Depth to saturated zone	1.00	Unstable excavation walls	0.10
				Piping	0.63		
7131A:							
Alvin, rarely flooded	90	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
7131B:							
Alvin, rarely flooded	90	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
		Slope	0.08				

Table 18a.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
7142A:							
Patton, rarely flooded	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
				Ponding	1.00	Unstable excavation walls	0.10
				Piping	0.23		
7142A+:							
Patton, rarely flooded, overwash	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
				Ponding	1.00	Unstable excavation walls	0.10
				Piping	0.48		
7173A:							
McGary, rarely flooded	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.02	Depth to saturated zone	1.00	Slow refill	0.98
						Unstable excavation walls	0.10
						Depth to saturated zone	0.01
7173B2:							
McGary, rarely flooded	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.02	Depth to saturated zone	1.00	Slow refill	0.98
						Unstable excavation walls	0.10
						Depth to saturated zone	0.01
7176A:							
Marissa, rarely flooded	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.54	Depth to saturated zone	1.00	Slow refill	0.46
				Piping	0.11	Unstable excavation walls	0.10
						Depth to saturated zone	0.01
7178A:							
Ruark, rarely flooded	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
				Piping	1.00	Unstable excavation walls	0.10
				Ponding	1.00		
7184A:							
Roby, rarely flooded	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Unstable excavation walls	1.00
				Seepage	0.07	Depth to saturated zone	0.01

Table 18a.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
7208A:							
Sexton, rarely flooded	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Ponding	1.00	Depth to water	1.00
				Depth to saturated zone	1.00		
				Piping	0.58		
7434A:							
Ridgway, rarely flooded	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.99	Depth to water	1.00
7434B:							
Ridgway, rarely flooded	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.99	Depth to water	1.00
		Slope	0.02				
7436A:							
Meadowbank, rarely flooded	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.96	Depth to water	1.00
7445A:							
Newhaven, rarely flooded	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Unstable excavation walls	1.00
				Piping	0.95	Depth to saturated zone	0.01
7446A:							
Springerton, rarely flooded	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
				Ponding	1.00	Unstable excavation walls	0.10
				Piping	1.00		
7462A:							
Sciotoville, rarely flooded	95	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
				Depth to saturated zone	0.95		
7462B:							
Sciotoville, rarely flooded	95	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	0.08	Depth to saturated zone	0.95		
7465A:							
Montgomery, rarely flooded	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.04	Depth to saturated zone	1.00	Slow refill	0.96
				Ponding	1.00	Unstable excavation walls	0.10

Table 18a.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
7467B2:							
Markland, rarely flooded	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.08	Piping	0.10	Depth to water	1.00
		Seepage	0.04				
7467C2:							
Markland, rarely flooded	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.92	Piping	0.10	Depth to water	1.00
		Seepage	0.04				
7482B:							
Uniontown, rarely flooded	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.72	Piping	0.88	Slow refill	0.28
				Depth to saturated zone	0.68	Depth to saturated zone	0.14
						Unstable excavation walls	0.10
7482C2:							
Uniontown, rarely flooded	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.92	Piping	0.87	Slow refill	0.28
		Seepage	0.72	Depth to saturated zone	0.68	Depth to saturated zone	0.14
						Unstable excavation walls	0.10
7483A:							
Henshaw, rarely flooded	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.04	Depth to saturated zone	1.00	Slow refill	0.96
				Piping	1.00	Unstable excavation walls	0.10
7484A:							
Harco, rarely flooded	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
				Piping	0.90	Unstable excavation walls	0.10
7524A:							
Zipp, rarely flooded	90	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Slow refill	0.96
				Ponding	1.00	Unstable excavation walls	0.10
				Hard to pack	0.31		
7524A+:							
Zipp, rarely flooded, overwash	90	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Slow refill	0.28
				Ponding	1.00	Unstable excavation walls	0.10

Table 18a.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7750A:							
Skelton, rarely flooded	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Piping	0.67	Depth to water	1.00
7750B:							
Skelton, rarely flooded	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Piping	0.67	Depth to water	1.00
7750C2:							
Skelton, rarely flooded	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.92	Piping	0.62	Depth to water	1.00
		Seepage	0.72				
7751A:							
Crawleyville, rarely flooded	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
				Piping	1.00	Unstable excavation walls	0.10
7787A:							
Banlic, rarely flooded	90	Somewhat limited		Very limited		Very limited	
		Seepage	0.04	Depth to saturated zone	1.00	Depth to water	1.00
				Piping	1.00		
7812E:							
Typic Hapludalfs, rarely flooded	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.38	Depth to water	1.00
		Seepage	1.00				
8072A:							
Sharon, occasionally flooded	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Piping	1.00	Depth to saturated zone	0.81
						Slow refill	0.28
						Unstable excavation walls	0.10
8460A:							
Ginat, occasionally flooded	90	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Depth to saturated zone	1.00	Depth to water	1.00
				Ponding	1.00		
				Piping	0.89		

Table 18b.--Water Management

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2A:							
Cisne	90	Not limited		Very limited		Very limited	
				Water erosion	1.00	Restricted	1.00
				Depth to	1.00	permeability	
				saturated zone		Frost action	0.10
				Restricted	0.98		
				permeability			
3A:							
Hoyleton	90	Not limited		Very limited		Very limited	
				Water erosion	1.00	Restricted	1.00
				Depth to	1.00	permeability	
				saturated zone		Deep to water	0.10
				Restricted	0.91		
				permeability			
3B:							
Hoyleton	90	Somewhat limited		Very limited		Very limited	
		Slope	0.16	Water erosion	1.00	Restricted	1.00
				Depth to	1.00	permeability	
				saturated zone		Deep to water	0.10
				Restricted	0.91		
				permeability			
8D2:							
Hickory, eroded	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Very deep to	1.00
						water	
8F:							
Hickory	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Very deep to	1.00
						water	
12A:							
Wynoose	90	Not limited		Very limited		Very limited	
				Water erosion	1.00	Restricted	1.00
				Depth to	1.00	permeability	
				saturated zone		Ponding	0.47
				Ponding	1.00	Frost action	0.10
				Restricted	1.00		
				permeability			
13A:							
Bluford	90	Not limited		Very limited		Very limited	
				Water erosion	1.00	Restricted	1.00
				Depth to	1.00	permeability	
				saturated zone		Frost action	0.10
				Restricted	0.91	Deep to water	0.01
				permeability			

Table 18b.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
13B:							
Bluford	90	Somewhat limited		Very limited		Very limited	
		Slope	0.36	Water erosion	1.00	Restricted permeability	1.00
				Depth to saturated zone	1.00	Frost action	0.10
				Restricted permeability	0.91	Slope	0.04
						Deep to water	0.01
13B2:							
Bluford, eroded	90	Somewhat limited		Very limited		Very limited	
		Slope	0.36	Water erosion	1.00	Restricted permeability	1.00
				Depth to saturated zone	1.00	Frost action	0.10
				Restricted permeability	0.91	Slope	0.04
						Deep to water	0.01
14B:							
Ava	90	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.16	Water erosion	1.00	Deep to water	0.26
				Rooting depth	1.00	Restricted permeability	0.21
				Depth to saturated zone	1.00	Depth to fragipan	0.13
				Restricted permeability	0.22	Frost action	0.10
14B2:							
Ava, eroded	90	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.36	Water erosion	1.00	Depth to fragipan	0.71
				Rooting depth	1.00	Deep to water	0.26
				Depth to saturated zone	1.00	Restricted permeability	0.21
				Restricted permeability	0.22	Frost action	0.10
						Slope	0.04
14C2:							
Ava, eroded	90	Very limited		Very limited		Somewhat limited	
		Slope	1.00	Water erosion	1.00	Slope	0.84
				Rooting depth	1.00	Depth to fragipan	0.71
				Depth to saturated zone	1.00	Deep to water	0.26
				Restricted permeability	0.22	Restricted permeability	0.21
						Frost action	0.10
14C3:							
Ava, severely eroded	90	Very limited		Very limited		Somewhat limited	
		Slope	1.00	Water erosion	1.00	Slope	0.84
				Rooting depth	1.00	Depth to fragipan	0.71
				Depth to saturated zone	1.00	Deep to water	0.26
				Restricted permeability	0.22	Restricted permeability	0.21
						Frost action	0.10
15B:							
Parke	90	Somewhat limited		Very limited		Very limited	
		Slope	0.36	Water erosion	1.00	Very deep to water	1.00
						Frost action	0.10
						Slope	0.04

Table 18b.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Constructing grassed waterways and surface drains: Rating class and limiting features	Value	Constructing terraces and diversions: Rating class and limiting features	Value	Tile drains and underground outlets: Rating class and limiting features	Value
15C2:							
Parke, eroded	90	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Very deep to water	1.00
						Slope	0.84
						Frost action	0.10
15D2:							
Parke, eroded	90	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
				Slope	1.00	Very deep to water	1.00
						Frost action	0.10
19F:							
Sylvan	90	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
				Slope	1.00	Very deep to water	1.00
						Frost action	0.10
53B:							
Bloomfield	90	Somewhat limited		Very limited		Very limited	
		Slope	0.16	Too sandy	1.00	Very deep to water	1.00
						Unstable excavation walls	0.50
53C:							
Bloomfield	90	Very limited		Very limited		Very limited	
		Slope	1.00	Too sandy	1.00	Very deep to water	1.00
						Slope	0.84
						Unstable excavation walls	0.50
53D:							
Bloomfield	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Too sandy	1.00	Very deep to water	1.00
						Unstable excavation walls	0.50
75B:							
Drury	90	Somewhat limited		Very limited		Very limited	
		Slope	0.36	Water erosion	1.00	Very deep to water	1.00
						Frost action	0.10
						Slope	0.04
87A:							
Dickinson	90	Not limited		Very limited		Very limited	
				Too sandy	1.00	Very deep to water	1.00
						Unstable excavation walls	0.50

Table 18b.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Constructing grassed waterways and surface drains: Rating class and limiting features	Value	Constructing terraces and diversions: Rating class and limiting features	Value	Tile drains and underground outlets: Rating class and limiting features	Value
87B:							
Dickinson	90	Somewhat limited		Very limited		Very limited	
		Slope	0.25	Too sandy	1.00	Very deep to water	1.00
						Unstable excavation walls	0.50
						Slope	0.01
109A:							
Racoon	90	Not limited		Very limited		Very limited	
				Water erosion	1.00	Restricted permeability	1.00
				Depth to saturated zone	1.00	Frost action	0.10
				Ponding	1.00		
				Restricted permeability	0.91		
131A:							
Alvin	90	Not limited		Very limited		Very limited	
				Too sandy	1.00	Very deep to water	1.00
131B:							
Alvin	90	Somewhat limited		Very limited		Very limited	
		Slope	0.36	Too sandy	1.00	Very deep to water	1.00
						Slope	0.04
131C:							
Alvin	90	Very limited		Very limited		Very limited	
		Slope	1.00	Too sandy	1.00	Very deep to water	1.00
						Slope	0.84
131F:							
Alvin	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Too sandy	1.00	Very deep to water	1.00
142A:							
Patton	90	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Ponding	0.33
						Frost action	0.10
				Ponding	1.00		
142A+:							
Patton, overwash	90	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Ponding	0.33
						Frost action	0.10
				Ponding	1.00		
164A:							
Stoy	90	Not limited		Very limited		Very limited	
				Water erosion	1.00	Restricted permeability	1.00
				Depth to saturated zone	1.00	Deep to water	0.11
				Restricted permeability	0.91	Frost action	0.10

Table 18b.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Constructing grassed waterways and surface drains: Rating class and limiting features	Value	Constructing terraces and diversions: Rating class and limiting features	Value	Tile drains and underground outlets: Rating class and limiting features	Value
164B:							
Stoy	90	Somewhat limited		Very limited		Very limited	
		Slope	0.36	Water erosion	1.00	Restricted permeability	1.00
				Depth to saturated zone	1.00	Deep to water	0.11
				Restricted permeability	0.91	Frost action	0.10
						Slope	0.04
165A:							
Weir	90	Not limited		Very limited		Very limited	
				Water erosion	1.00	Restricted permeability	1.00
				Depth to saturated zone	1.00	Frost action	0.10
				Ponding	1.00		
				Restricted permeability	1.00		
173A:							
McGary	90	Not limited		Very limited		Somewhat limited	
				Water erosion	1.00	Restricted permeability	0.43
				Depth to saturated zone	1.00	Deep to water	0.11
				Restricted permeability	0.40	Frost action	0.10
173B2:							
McGary, eroded	90	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.16	Water erosion	1.00	Restricted permeability	0.43
				Depth to saturated zone	1.00	Deep to water	0.11
				Restricted permeability	0.40	Frost action	0.10
176A:							
Marissa	90	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Deep to water	0.11
						Frost action	0.10
178A:							
Ruark	90	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Ponding	0.47
						Restricted permeability	0.21
				Ponding	1.00		
				Restricted permeability	0.22	Frost action	0.10
184A:							
Roby	90	Not limited		Very limited		Somewhat limited	
				Too sandy	1.00	Unstable excavation walls	0.50
				Depth to saturated zone	1.00	Deep to water	0.11

Table 18b.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
208A:							
Sexton	90	Not limited		Very limited		Very limited	
				Water erosion	1.00	Restricted permeability	1.00
				Depth to saturated zone	1.00	Ponding	0.47
				Ponding	1.00	Frost action	0.10
				Too sandy	1.00		
				Restricted permeability	0.91		
214B:							
Hosmer	90	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.36	Water erosion	1.00	Depth to fragipan	0.71
				Rooting depth	1.00	Deep to water	0.26
				Depth to saturated zone	1.00	Frost action	0.10
						Slope	0.04
214B2:							
Hosmer, eroded	90	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.36	Water erosion	1.00	Depth to fragipan	0.89
				Rooting depth	1.00	Deep to water	0.26
				Depth to saturated zone	1.00	Frost action	0.10
						Slope	0.04
214C2:							
Hosmer, eroded	90	Very limited		Very limited		Somewhat limited	
		Slope	1.00	Water erosion	1.00	Depth to fragipan	0.89
				Rooting depth	1.00	Slope	0.84
				Depth to saturated zone	1.00	Deep to water	0.26
						Frost action	0.10
214C3:							
Hosmer, severely eroded	90	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Depth to fragipan	1.00
				Rooting depth	1.00	Slope	0.84
				Depth to saturated zone	1.00	Deep to water	0.26
						Frost action	0.10
231A:							
Evansville	90	Not limited		Very limited		Somewhat limited	
				Water erosion	1.00	Ponding	0.47
				Depth to saturated zone	1.00	Frost action	0.10
				Ponding	1.00		
301B:							
Grantsburg	90	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.36	Water erosion	1.00	Deep to water	0.26
				Rooting depth	1.00	Restricted permeability	0.21
				Depth to saturated zone	1.00	Frost action	0.10
				Restricted permeability	0.22	Depth to fragipan	0.04
						Slope	0.04

Table 18b.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Constructing grassed waterways and surface drains: Rating class and limiting features	Value	Constructing terraces and diversions: Rating class and limiting features	Value	Tile drains and underground outlets: Rating class and limiting features	Value
308B:							
Alford	90	Somewhat limited		Very limited		Very limited	
		Slope	0.36	Water erosion	1.00	Very deep to water	1.00
						Frost action	0.10
						Slope	0.04
308B2:							
Alford, eroded	90	Somewhat limited		Very limited		Very limited	
		Slope	0.36	Water erosion	1.00	Very deep to water	1.00
						Frost action	0.10
						Slope	0.04
308C2:							
Alford, eroded	90	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Very deep to water	1.00
						Slope	0.84
						Frost action	0.10
308C3:							
Alford, severely eroded	90	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Very deep to water	1.00
						Slope	0.84
						Frost action	0.10
308D2:							
Alford, eroded	90	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
				Slope	1.00	Very deep to water	1.00
						Frost action	0.10
308D3:							
Alford, severely eroded	90	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
				Slope	1.00	Very deep to water	1.00
						Frost action	0.10
337A:							
Creal	90	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.04	Water erosion	1.00	Restricted permeability	0.21
				Depth to saturated zone	1.00	Deep to water	0.10
				Restricted permeability	0.22	Frost action	0.10
339F:							
Wellston	90	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
				Slope	1.00	Very deep to water	1.00
						Frost action	0.10

Table 18b.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Constructing grassed waterways and surface drains: Rating class and limiting features	Value	Constructing terraces and diversions: Rating class and limiting features	Value	Tile drains and underground outlets: Rating class and limiting features	Value
340C2:							
Zanesville, eroded	90	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Depth to fragipan	1.00
		Depth to hard bedrock	0.02	Rooting depth	1.00	Slope	0.84
				Depth to saturated zone	1.00	Deep to water	0.26
						Frost action	0.10
340C3:							
Zanesville, severely eroded	90	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Depth to fragipan	1.00
		Depth to hard bedrock	0.08	Rooting depth	1.00	Slope	0.84
				Depth to saturated zone	1.00	Deep to water	0.26
						Frost action	0.10
340D2:							
Zanesville, eroded	90	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Depth to hard bedrock	0.02	Slope	1.00	Depth to fragipan	1.00
				Rooting depth	1.00	Deep to water	0.26
				Depth to saturated zone	1.00	Frost action	0.10
340D3:							
Zanesville, severely eroded	90	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Depth to hard bedrock	0.08	Slope	1.00	Depth to fragipan	1.00
				Rooting depth	1.00	Deep to water	0.26
				Depth to saturated zone	1.00	Frost action	0.10
434A:							
Ridgway	90	Not limited		Very limited		Very limited	
				Water erosion	1.00	Very deep to water	1.00
						Frost action	0.10
434B:							
Ridgway	90	Somewhat limited		Very limited		Very limited	
		Slope	0.25	Water erosion	1.00	Very deep to water	1.00
				Too sandy	1.00	Unstable excavation walls	0.50
						Frost action	0.10
						Slope	0.01
434C2:							
Ridgway, eroded	90	Somewhat limited		Very limited		Very limited	
		Slope	0.95	Water erosion	1.00	Very deep to water	1.00
				Too sandy	1.00	Slope	0.63
						Unstable excavation walls	0.50
						Frost action	0.10

Table 18b.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
436A:							
Meadowbank----------	90	Not limited		Very limited		Very limited	
				Too sandy	1.00	Very deep to water	1.00
						Frost action	0.10
436B:							
Meadowbank----------	90	Somewhat limited		Very limited		Very limited	
		Slope	0.16	Too sandy	1.00	Very deep to water	1.00
						Frost action	0.10
445A:							
Newhaven-----------	90	Not limited		Very limited		Somewhat limited	
				Too sandy	1.00	Deep to water	0.11
				Depth to saturated zone	1.00		
446A:							
Springerton---------	90	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Ponding	0.47
						Frost action	0.10
				Ponding	1.00		
453B:							
Muren---------------	90	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.36	Water erosion	1.00	Frost action	0.10
				Depth to saturated zone	1.00	Deep to water	0.04
						Slope	0.04
467B2:							
Markland, eroded----	90	Somewhat limited		Very limited		Very limited	
		Slope	0.36	Water erosion	1.00	Very deep to water	1.00
				Restricted permeability	0.40		
						Restricted permeability	0.43
						Slope	0.04
467C2:							
Markland, eroded----	90	Somewhat limited		Very limited		Very limited	
		Slope	0.95	Water erosion	1.00	Very deep to water	1.00
				Restricted permeability	0.40		
						Slope	0.63
						Restricted permeability	0.43
467C3:							
Markland, severely eroded------------	90	Somewhat limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Very deep to water	1.00
				Restricted permeability	0.40		
						Slope	0.84
						Restricted permeability	0.43
482B:							
Uniontown-----------	90	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.16	Water erosion	1.00	Deep to water	0.37
				Depth to saturated zone	1.00	Frost action	0.10

Table 18b.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Constructing grassed waterways and surface drains: Rating class and limiting features	Value	Constructing terraces and diversions: Rating class and limiting features	Value	Tile drains and underground outlets: Rating class and limiting features	Value
482B2:							
Uniontown, eroded---	90	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.16	Water erosion	1.00	Deep to water	0.37
				Depth to saturated zone	1.00	Frost action	0.10
482C2:							
Uniontown, eroded---	90	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.95	Water erosion	1.00	Slope	0.63
				Depth to saturated zone	1.00	Deep to water	0.37
						Frost action	0.10
482C3:							
Uniontown, severely eroded-------------	90	Very limited		Very limited		Somewhat limited	
		Slope	1.00	Water erosion	1.00	Slope	0.84
				Depth to saturated zone	1.00	Deep to water	0.37
						Frost action	0.10
483A:							
Henshaw-------------	90	Not limited		Very limited		Somewhat limited	
				Water erosion	1.00	Restricted permeability	0.21
				Depth to saturated zone	1.00	Frost action	0.10
				Restricted permeability	0.22	Deep to water	0.03
484A:							
Harco---------------	90	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Deep to water	0.11
						Frost action	0.10
585F:							
Negley--------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Very deep to water	1.00
630C3:							
Navlys, severely eroded-------------	90	Somewhat limited		Very limited		Very limited	
		Slope	0.99	Water erosion	1.00	Very deep to water	1.00
						Slope	0.74
						Frost action	0.10
630D3:							
Navlys, severely eroded-------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
				Slope	1.00	Very deep to water	1.00
						Frost action	0.10
750A:							
Skelton-------------	90	Not limited		Not limited		Very limited	
						Very deep to water	1.00

Table 18b.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Constructing grassed waterways and surface drains: Rating class and limiting features	Value	Constructing terraces and diversions: Rating class and limiting features	Value	Tile drains and underground outlets: Rating class and limiting features	Value
750B:							
Skelton	90	Somewhat limited		Not limited		Very limited	
		Slope	0.16			Very deep to water	1.00
750C2:							
Skelton, eroded	90	Somewhat limited		Not limited		Very limited	
		Slope	0.95			Very deep to water	1.00
						Slope	0.63
751A:							
Crawleyville	90	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Frost action	0.10
784F:							
Berks	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Content of large stones	1.00	Very deep to water	1.00
		Content of cobbles	0.99	Depth to hard bedrock	0.42	Content of large stones	1.00
		Depth to soft bedrock	0.42	Depth to soft bedrock	0.42	Depth to bedrock	0.11
802B:							
Orthents, loamy	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Restricted permeability	0.22	Very deep to water	1.00
						Restricted permeability	0.21
865:							
Pits, gravel	90	Not rated		Not rated		Not rated	
898G:							
Sylvan	45	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
				Slope	1.00	Very deep to water	1.00
						Frost action	0.10
Hickory	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Very deep to water	1.00
908G:							
Kell	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	0.10	Depth to soft bedrock	0.10	Very deep to water	1.00
						Depth to bedrock	0.02
Hickory	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Very deep to water	1.00

Table 18b.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Constructing grassed waterways and surface drains: Rating class and limiting features	Value	Constructing terraces and diversions: Rating class and limiting features	Value	Tile drains and underground outlets: Rating class and limiting features	Value
929D3:							
Hickory, severely eroded	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Very deep to water	1.00
Ava, severely eroded	35	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
				Slope	1.00	Depth to fragipan	0.71
				Rooting depth	1.00	Deep to water	0.26
				Depth to saturated zone	1.00	Restricted permeability	0.21
				Restricted permeability	0.22	Frost action	0.10
1288A:							
Petrolia, undrained, frequently flooded	90	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Ponding	0.47
				Ponding	1.00	Flooding	0.35
				Restricted permeability	0.22	Restricted permeability	0.21
						Frost action	0.10
3092A:							
Sarpy, frequently flooded	90	Not limited		Very limited		Very limited	
				Too sandy	1.00	Very deep to water	1.00
						Unstable excavation walls	0.50
						Flooding	0.35
3103L:							
Houghton, frequently flooded	90	Not rated		Very limited		Very limited	
				Depth to saturated zone	1.00	Subsidence	1.00
				Ponding	1.00	Ponding	0.47
						Flooding	0.35
						Frost action	0.10
3108A:							
Bonnie, frequently flooded	90	Not limited		Very limited		Somewhat limited	
				Water erosion	1.00	Ponding	0.47
				Depth to saturated zone	1.00	Flooding	0.35
				Ponding	1.00	Restricted permeability	0.21
				Restricted permeability	0.22	Frost action	0.10
3142A:							
Patton, frequently flooded	90	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Flooding	0.35
				Ponding	1.00	Ponding	0.33
						Frost action	0.10

Table 18b.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Constructing grassed waterways and surface drains: Rating class and limiting features	Value	Constructing terraces and diversions: Rating class and limiting features	Value	Tile drains and underground outlets: Rating class and limiting features	Value
3178A:							
Ruark, frequently flooded	90	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Flooding	0.35
				Ponding	1.00	Ponding	0.33
				Restricted permeability	0.22	Restricted permeability	0.21
						Frost action	0.10
3231A:							
Evansville, frequently flooded	90	Not limited		Very limited		Somewhat limited	
				Water erosion	1.00	Flooding	0.35
				Depth to saturated zone	1.00	Ponding	0.33
				Ponding	1.00	Frost action	0.10
3302A:							
Ambraw, frequently flooded	90	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Flooding	0.35
				Ponding	1.00	Ponding	0.33
				Restricted permeability	0.22	Restricted permeability	0.21
						Frost action	0.10
3304A:							
Landes, frequently flooded	90	Not limited		Very limited		Very limited	
				Too sandy	1.00	Very deep to water	1.00
						Unstable excavation walls	0.50
						Flooding	0.35
3331A:							
Haymond, frequently flooded	90	Somewhat limited		Very limited		Very limited	
		Slope	0.04	Water erosion	1.00	Very deep to water	1.00
						Flooding	0.35
						Frost action	0.10
3333A:							
Wakeland, frequently flooded	90	Not limited		Very limited		Somewhat limited	
				Water erosion	1.00	Flooding	0.35
				Depth to saturated zone	1.00	Frost action	0.10
						Deep to water	0.01
3382A:							
Belknap, frequently flooded	90	Not limited		Very limited		Somewhat limited	
				Water erosion	1.00	Flooding	0.35
				Depth to saturated zone	1.00	Frost action	0.10
						Deep to water	0.01

Table 18b.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Constructing grassed waterways and surface drains: Rating class and limiting features	Value	Constructing terraces and diversions: Rating class and limiting features	Value	Tile drains and underground outlets: Rating class and limiting features	Value
3420A:							
Piopolis, frequently flooded	90	Not limited		Very limited		Very limited	
				Depth to saturated zone	1.00	Restricted permeability	1.00
				Ponding	1.00	Ponding	0.47
				Restricted permeability	0.91	Flooding	0.35
						Frost action	0.10
3465A:							
Montgomery, frequently flooded	90	Not limited		Very limited		Very limited	
				Depth to saturated zone	1.00	Restricted permeability	1.00
				Ponding	1.00	Ponding	0.47
				Restricted permeability	0.91	Flooding	0.35
						Frost action	0.10
3524A:							
Zipp, frequently flooded	90	Not limited		Very limited		Very limited	
				Depth to saturated zone	1.00	Restricted permeability	1.00
				Ponding	1.00	Ponding	0.47
				Restricted permeability	0.91	Flooding	0.35
						Frost action	0.10
3597A:							
Armiesburg, frequently flooded	90	Not limited		Not limited		Very limited	
						Very deep to water	1.00
						Flooding	0.35
						Frost action	0.10
3601A:							
Nolin, frequently flooded	90	Not limited		Very limited		Very limited	
				Water erosion	1.00	Very deep to water	1.00
						Flooding	0.35
						Frost action	0.10
3602A:							
Newark, frequently flooded	90	Not limited		Very limited		Somewhat limited	
				Water erosion	1.00	Flooding	0.35
				Depth to saturated zone	1.00	Frost action	0.10
3665A:							
Stonelick, frequently flooded	90	Not limited		Not limited		Very limited	
						Very deep to water	1.00
						Flooding	0.35

Table 18b.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Constructing grassed waterways and surface drains: Rating class and limiting features	Value	Constructing terraces and diversions: Rating class and limiting features	Value	Tile drains and underground outlets: Rating class and limiting features	Value
7087A:							
Dickinson, rarely flooded	90	Not limited		Very limited		Very limited	
				Too sandy	1.00	Very deep to water	1.00
						Unstable excavation walls	0.50
						Flooding	0.35
7109A:							
Racoon, rarely flooded	90	Not limited		Very limited		Very limited	
				Water erosion	1.00	Restricted permeability	1.00
				Depth to saturated zone	1.00	Ponding	0.47
				Ponding	1.00	Frost action	0.10
				Restricted permeability	0.91	Flooding	0.05
7131A:							
Alvin, rarely flooded	90	Not limited		Very limited		Very limited	
				Too sandy	1.00	Very deep to water	1.00
						Flooding	0.05
7131B:							
Alvin, rarely flooded	90	Somewhat limited		Very limited		Very limited	
		Slope	0.36	Too sandy	1.00	Very deep to water	1.00
						Flooding	0.05
						Slope	0.04
7142A:							
Patton, rarely flooded	90	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Ponding	0.47
						Frost action	0.10
				Ponding	1.00	Flooding	0.05
7142A+:							
Patton, rarely flooded, overwash	90	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Ponding	0.47
						Frost action	0.10
				Ponding	1.00	Flooding	0.05
7173A:							
McGary, rarely flooded	90	Not limited		Very limited		Somewhat limited	
				Water erosion	1.00	Restricted permeability	0.43
				Depth to saturated zone	1.00	Deep to water	0.11
				Restricted permeability	0.40	Frost action	0.10
						Flooding	0.05

Table 18b.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7173B2:							
McGary, rarely flooded	90	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.16	Water erosion	1.00	Restricted permeability	0.43
				Depth to saturated zone	1.00	Deep to water	0.11
				Restricted permeability	0.40	Frost action	0.10
						Flooding	0.05
7176A:							
Marissa, rarely flooded	90	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Deep to water	0.11
						Frost action	0.10
						Flooding	0.05
7178A:							
Ruark, rarely flooded	90	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Ponding	0.47
				Ponding	1.00	Restricted permeability	0.21
				Restricted permeability	0.22	Frost action	0.10
						Flooding	0.05
7184A:							
Roby, rarely flooded	90	Not limited		Very limited		Somewhat limited	
				Too sandy	1.00	Unstable excavation walls	0.50
				Depth to saturated zone	1.00	Deep to water	0.11
						Flooding	0.05
7208A:							
Sexton, rarely flooded	90	Not limited		Very limited		Very limited	
				Water erosion	1.00	Restricted permeability	1.00
				Depth to saturated zone	1.00	Ponding	0.47
				Ponding	1.00	Frost action	0.10
				Too sandy	1.00	Flooding	0.05
				Restricted permeability	0.91		
7434A:							
Ridgway, rarely flooded	90	Not limited		Very limited		Very limited	
				Water erosion	1.00	Very deep to water	1.00
				Too sandy	1.00	Unstable excavation walls	0.50
						Frost action	0.10
						Flooding	0.05

Table 18b.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Constructing grassed waterways and surface drains: Rating class and limiting features	Value	Constructing terraces and diversions: Rating class and limiting features	Value	Tile drains and underground outlets: Rating class and limiting features	Value
7434B:							
Ridgway, rarely flooded	90	Somewhat limited		Very limited		Very limited	
		Slope	0.25	Water erosion	1.00	Very deep to water	1.00
				Too sandy	1.00	Unstable excavation walls	0.50
						Frost action	0.10
						Slope	0.01
7436A:							
Meadowbank, rarely flooded	90	Not limited		Very limited		Very limited	
				Too sandy	1.00	Very deep to water	1.00
						Frost action	0.10
						Flooding	0.05
7445A:							
Newhaven, rarely flooded	90	Not limited		Very limited		Somewhat limited	
				Too sandy	1.00	Deep to water	0.11
				Depth to saturated zone	1.00	Flooding	0.05
7446A:							
Springerton, rarely flooded	90	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Ponding	0.47
						Frost action	0.10
				Ponding	1.00	Flooding	0.05
7462A:							
Sciotoville, rarely flooded	95	Not limited		Very limited		Somewhat limited	
				Water erosion	1.00	Restricted permeability	0.43
				Depth to saturated zone	1.00	Deep to water	0.17
				Restricted permeability	0.40	Flooding	0.05
7462B:							
Sciotoville, rarely flooded	95	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.36	Water erosion	1.00	Restricted permeability	0.43
				Depth to saturated zone	1.00	Deep to water	0.17
				Restricted permeability	0.40	Flooding	0.05
						Slope	0.04
7465A:							
Montgomery, rarely flooded	90	Not limited		Very limited		Very limited	
				Depth to saturated zone	1.00	Restricted permeability	1.00
				Ponding	1.00	Ponding	0.47
				Restricted permeability	0.91	Frost action	0.10
						Flooding	0.05

Table 18b.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Constructing grassed waterways and surface drains: Rating class and limiting features	Value	Constructing terraces and diversions: Rating class and limiting features	Value	Tile drains and underground outlets: Rating class and limiting features	Value
7467B2:							
Markland, rarely flooded	90	Somewhat limited		Very limited		Very limited	
		Slope	0.36	Water erosion	1.00	Very deep to water	1.00
				Restricted permeability	0.40	Restricted permeability	0.43
						Flooding	0.05
						Slope	0.04
7467C2:							
Markland, rarely flooded	90	Somewhat limited		Very limited		Very limited	
		Slope	0.95	Water erosion	1.00	Very deep to water	1.00
				Restricted permeability	0.40	Slope	0.63
						Restricted permeability	0.43
						Flooding	0.05
7482B:							
Uniontown, rarely flooded	90	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.16	Water erosion	1.00	Deep to water	0.37
				Depth to saturated zone	1.00	Frost action	0.10
						Flooding	0.05
7482C2:							
Uniontown, rarely flooded	90	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.95	Water erosion	1.00	Slope	0.63
				Depth to saturated zone	1.00	Deep to water	0.37
						Frost action	0.10
						Flooding	0.05
7483A:							
Henshaw, rarely flooded	90	Not limited		Very limited		Somewhat limited	
				Water erosion	1.00	Restricted permeability	0.21
				Depth to saturated zone	1.00	Frost action	0.10
				Restricted permeability	0.22	Flooding	0.05
7484A:							
Harco, rarely flooded	90	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Frost action	0.10
						Flooding	0.05
						Deep to water	0.03
7524A:							
Zipp, rarely flooded	90	Not limited		Very limited		Very limited	
				Depth to saturated zone	1.00	Restricted permeability	1.00
				Ponding	1.00	Ponding	0.47
				Restricted permeability	0.91	Frost action	0.10
						Flooding	0.05

Table 18b.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Constructing grassed waterways and surface drains: Rating class and limiting features	Value	Constructing terraces and diversions: Rating class and limiting features	Value	Tile drains and underground outlets: Rating class and limiting features	Value
7524A+:							
Zipp, rarely flooded, overwash--	90	Not limited		Very limited		Very limited	
				Water erosion	1.00	Restricted permeability	1.00
				Depth to saturated zone	1.00	Ponding	0.47
				Ponding	1.00	Frost action	0.10
				Restricted permeability	0.91	Flooding	0.05
7750A:							
Skelton, rarely flooded-----------	90	Not limited		Not limited		Very limited	
						Very deep to water	1.00
						Flooding	0.05
7750B:							
Skelton, rarely flooded-----------	90	Somewhat limited		Not limited		Very limited	
		Slope	0.16			Very deep to water	1.00
						Flooding	0.05
7750C2:							
Skelton, rarely flooded-----------	90	Somewhat limited		Not limited		Very limited	
		Slope	0.95			Very deep to water	1.00
						Slope	0.63
						Flooding	0.05
7751A:							
Crawleyville, rarely flooded-----------	90	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Frost action	0.10
						Flooding	0.05
7787A:							
Banlic, rarely flooded-----------	90	Not limited		Very limited		Very limited	
				Water erosion	1.00	Depth to dense layer	1.00
				Depth to saturated zone	1.00	Restricted permeability	0.96
				Restricted permeability	0.91	Frost action	0.10
						Flooding	0.05
						Deep to water	0.01
7812E:							
Typic Hapludalfs, rarely flooded-----	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Very deep to water	1.00
						Flooding	0.05

Table 18b.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8072A:							
Sharon, occasionally flooded-----------	90	Somewhat limited		Very limited		Very limited	
		Slope	0.04	Water erosion	1.00	Very deep to water	1.00
						Flooding	0.10
						Frost action	0.10
8460A:							
Ginat, occasionally flooded-----------	90	Not limited		Very limited		Very limited	
				Water erosion	1.00	Restricted permeability	1.00
				Depth to saturated zone	1.00	Flooding	0.10
				Ponding	1.00	Frost action	0.10
				Restricted permeability	1.00		

Table 19.--Engineering Index Properties

(Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage p... sieve numb...		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	4...
	In				Pct	Pct			
2A:									
Cisne	0-8	Silt loam	CL-ML, CL, ML	A-4	0	0	100	100	96-
	8-17	Silt loam	CL, ML	A-4, A-6	0	0	100	100	95-
	17-37	Silty clay loam, silty clay	CH, CL	A-6, A-7-6	0	0	100	100	96-
	37-60	Silty clay loam, silt loam, clay loam, loam	CL	A-6, A-7-6	0	0	100	92-100	83-
	60-80	Silt loam, loam, clay loam, silty clay loam	CL	A-7-6, A-6	0	0	97-100	84-100	75-
3A:									
Hoyleton	0-8	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	94-
	8-11	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	94-
	11-39	Silty clay, silty clay loam	CH, CL	A-7-6	0	0	100	100	96-
	39-80	Loam, clay loam, silty clay loam, silt loam	CL	A-4, A-6, A-7-6	0	0	97-100	84-100	75-
3B:									
Hoyleton	0-8	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	94-
	8-11	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	94-
	11-39	Silty clay, silty clay loam	CH, CL	A-7-6	0	0	100	100	96-
	39-80	Loam, clay loam, silty clay loam, silt loam	CL	A-4, A-6, A-7-6	0	0	97-100	84-100	75-
8D2:									
Hickory, eroded	0-10	Silt loam	CL	A-4, A-6	0	0	98-100	92-100	83-
	10-46	Clay loam, loam	CL	A-7-6, A-6	0	0-1	94-100	71-100	62-
	46-58	Clay loam, loam	CL	A-4, A-6	0	0-1	94-100	72-100	61-
	58-80	Loam, clay loam	CL, SC	A-6, A-4	0	0-1	94-100	72-100	60-

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage p[assing] sieve numb[er]		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	4[0]
	In				Pct	Pct			
8F:									
Hickory	0-3	Silt loam	CL-ML, CL, ML	A-4	0	0	98-100	91-100	79-
	3-16	Silt loam	CL-ML, CL, ML	A-4	0	0	98-100	91-100	79-
	16-43	Clay loam, loam	CL	A-6	0	0-1	94-100	72-100	61-
	43-80	Clay loam, loam	CL, SC	A-6, A-4	0	0-1	94-100	72-100	60-
12A:									
Wynoose	0-7	Silt loam	CL-ML, ML, CL	A-4	0	0	100	100	95-
	7-20	Silt loam	CL-ML, CL, ML	A-4, A-6	0	0	100	100	95-
	20-36	Silty clay loam, silty clay	CL, CH	A-7-6	0	0	100	100	96-
	36-66	Silty clay loam, clay loam, silt loam	CL	A-7-6, A-6	0	0	100	92-100	84-
	66-80	Silt loam, clay loam, silty clay loam	CL	A-7-6, A-6	0	0	97-100	84-100	76-
13A:									
Bluford	0-7	Silt loam	CL-ML, CL, ML	A-4	0	0	100	100	96-
	7-20	Silt loam	CL, CL-ML	A-6, A-4	0	0	100	100	96-
	20-35	Silty clay, silty clay loam	CH, CL	A-7-6	0	0	100	100	96-
	35-60	Silty clay loam, loam, silt loam	CL	A-7-6, A-6	0	0	100	92-100	83-
13B:									
Bluford	0-7	Silt loam	CL-ML, CL, ML	A-4	0	0	100	100	96-
	7-20	Silt loam	CL, CL-ML	A-6, A-4	0	0	100	100	96-
	20-35	Silty clay, silty clay loam	CH, CL	A-7-6	0	0	100	100	96-
	35-60	Silty clay loam, loam, silt loam	CL	A-7-6, A-6	0	0	100	92-100	83-

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage [passing] sieve num[ber]: 4	10	
	In				Pct	Pct			
13B2:									
Bluford, eroded----------------	0-7	Silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	96
	7-27	Silty clay, silty clay loam	CH, CL	A-7-6	0	0	100	100	96
	27-60	Silty clay loam, silt loam, loam	CL	A-7-6, A-6	0	0	100	92-100	83
14B:									
Ava----------------------------	0-8	Silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	97
	8-18	Silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	97
	18-36	Silty clay loam, silt loam	CL	A-7-6, A-6	0	0	100	100	96
	36-53	Silt loam, silty clay loam	CL, CL-ML	A-6, A-4	0	0	100	94-100	88
	53-80	Silt loam, clay loam, silty clay loam, loam	CL, CL-ML	A-6, A-4	0	0	100	85-100	79
14B2:									
Ava, eroded--------------------	0-9	Silt loam	CL	A-6, A-4	0	0	100	100	95
	9-28	Silty clay loam	CL	A-7-6, A-4, A-6	0	0	100	100	95
	28-64	Silt loam, silty clay loam	CL	A-6, A-4	0	0	100	94-100	90
	64-78	Loam, silt loam, clay loam	CL	A-6, A-4	0	0	100	85-100	80
14C2:									
Ava, eroded--------------------	0-9	Silt loam	CL	A-6, A-4	0	0	100	100	95
	9-28	Silty clay loam	CL	A-7-6, A-6, A-4	0	0	100	100	95
	28-64	Silt loam, silty clay loam	CL	A-6, A-4	0	0	100	94-100	90
	64-78	Loam, silt loam, clay loam	CL	A-6, A-4	0	0	100	85-100	80

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage ... sieve num...		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	
	In				Pct	Pct			
14C3:									
Ava, severely eroded	0-9	Silty clay loam	CL	A-6, A-4	0	0	100	100	97
	9-28	Silty clay loam	CL	A-4, A-6	0	0	100	100	96
	28-64	Silty clay loam, silt loam	CL	A-6, A-4	0	0	100	94-100	88
	64-78	Clay loam, silt loam, loam	CL	A-6, A-4	0	0	100	85-100	80
15B:									
Parke	0-9	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	92
	9-38	Silt loam, silty clay loam	CL	A-7-6, A-6, A-4	0	0	100	100	88
	38-60	Silt loam, fine sandy loam, clay loam, loam, sandy clay loam	SC, CL	A-2-4, A-6, A-4	0	0	91-100	77-100	59
15C2:									
Parke, eroded	0-6	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	92
	6-35	Silt loam, silty clay loam	CL	A-7-6, A-6, A-4	0	0	100	100	88
	35-80	Silt loam, fine sandy loam, clay loam, loam, sandy clay loam	SC, CL	A-2-4, A-6, A-4	0	0	91-100	77-100	59
15D2:									
Parke, eroded	0-6	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	92
	6-35	Silt loam, silty clay loam	CL	A-7-6, A-6, A-4	0	0	100	100	88
	35-80	Silt loam, fine sandy loam, clay loam, loam, sandy clay loam	SC, CL	A-2-4, A-6, A-4	0	0	91-100	77-100	59

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage ... sieve num...: 4	10	
	In				Pct	Pct			
19F:									
Sylvan	0-5	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	98
	5-10	Silt loam	ML, CL	A-6, A-4	0	0	100	100	97
	10-27	Silty clay loam, silt loam	CL	A-7-6, A-6	0	0	100	100	94
	27-80	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	92
53B:									
Bloomfield	0-5	Fine sand	SP-SM, SM	A-3, A-2-4	0	0	100	100	82
	5-38	Fine sand, loamy fine sand, sand	SP-SM, SM	A-2-4	0	0	100	100	83
	38-60	Fine sand, loamy fine sand, sand	SM	A-2-4	0	0	100	100	82
53C:									
Bloomfield	0-8	Fine sand	SP-SM, SM	A-3, A-2-4	0	0	100	100	81
	8-34	Fine sand, loamy fine sand, sand	SP-SM, SM	A-2-4	0	0	100	100	83
	34-60	Fine sand, loamy fine sand, sand	SM	A-2-4	0	0	100	100	83
53D:									
Bloomfield	0-8	Fine sand	SP-SM, SM	A-3, A-2-4	0	0	100	100	81
	8-34	Fine sand, loamy fine sand, sand	SP-SM, SM	A-2-4	0	0	100	100	83
	34-60	Fine sand, loamy fine sand, sand	SM	A-2-4	0	0	100	100	83
75B:									
Drury	0-6	Silt loam	ML, CL-ML, CL	A-6, A-4	0	0	100	94-100	86
	6-33	Silt loam	CL	A-6, A-4	0	0	100	94-100	92
	33-80	Very fine sandy loam, loam, silt loam	CL-ML, CL	A-6, A-4	0	0	100	94-100	91

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage sieve num: 4	Percentage sieve num: 10	
	In				Pct	Pct			
87A:									
Dickinson	0-8	Sandy loam	SC-SM, SC, SM	A-6, A-4	0	0	100	100	78
	8-20	Fine sandy loam, sandy loam	SC-SM, SC	A-6, A-4	0	0	100	100	78
	20-31	Fine sandy loam, sandy loam	SC-SM, SC	A-6, A-4	0	0	100	100	79
	31-36	Loamy sand, loamy fine sand, fine sand	SM, SC-SM	A-2-4	0	0	100	100	71
	36-60	Sand, loamy fine sand, loamy sand	SP-SM, SM	A-3, A-2-4	0	0	100	100	67
87B:									
Dickinson	0-8	Sandy loam	SC-SM, SC, SM	A-6, A-4	0	0	100	100	78
	8-20	Fine sandy loam, sandy loam	SC-SM, SC	A-6, A-4	0	0	100	100	78
	20-31	Fine sandy loam, sandy loam	SC-SM, SC	A-6, A-4	0	0	100	100	79
	31-36	Loamy sand, loamy fine sand, fine sand	SM, SC-SM	A-2-4	0	0	100	100	71
	36-60	Sand, loamy fine sand, loamy sand	SP-SM, SM	A-3, A-2-4	0	0	100	100	67
109A:									
Racoon	0-6	Silt loam	CL	A-6, A-4	0	0	100	100	97
	6-30	Silt loam	CL	A-6, A-4	0	0	100	100	97
	30-59	Silty clay loam	CL	A-7-6, A-6	0	0	100	100	95
	59-80	Loam, silt loam, silty clay loam	CL	A-6, A-4	0	0	100	100	97

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage p[assing] sieve numb[er]: 4	10	4[0]
	In				Pct	Pct			
131A:									
Alvin-------------------------	0-10	Fine sandy loam, very fine sandy loam	SM	A-2-4	0	0	100	100	83-
	10-16	Fine sandy loam, very fine sandy loam, sandy loam, loamy fine sand	SM	A-2-4	0	0	100	100	82-
	16-42	Fine sandy loam, very fine sandy loam, sandy loam, loam	SC, ML, CL, SM	A-4, A-6	0	0	100	100	82-
	42-80	Loamy fine sand, very fine sand, fine sandy loam, fine sand	SM	A-2-4	0	0	98-100	92-100	86-
131B:									
Alvin-------------------------	0-10	Fine sandy loam, very fine sandy loam	SM	A-2-4	0	0	100	100	82-
	10-16	Fine sandy loam, very fine sandy loam, sandy loam, loamy fine sand	SM	A-2-4	0	0	100	100	82-
	16-42	Fine sandy loam, very fine sandy loam, sandy loam, loam	SC, CL, ML, SM	A-4, A-6	0	0	100	100	82-
	42-80	Loamy fine sand, very fine sand, fine sandy loam, fine sand	SM	A-2-4	0	0	98-100	92-100	86-

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage p[assing] sieve numb[er]: 4	10	4[0]
	In				Pct	Pct			
131C:									
Alvin	0-10	Fine sandy loam, very fine sandy loam	SM	A-2-4	0	0	100	100	82-
	10-16	Fine sandy loam, very fine sandy loam, sandy loam, loamy fine sand	SM	A-2-4	0	0	100	100	82-
	16-42	Fine sandy loam, very fine sandy loam, sandy loam, loam	SC, CL, ML, SM	A-4, A-6	0	0	100	100	82-
	42-80	Loamy fine sand, very fine sand, fine sandy loam, fine sand	SM	A-2-4	0	0	98-100	92-100	86-
131F:									
Alvin	0-10	Fine sandy loam, very fine sandy loam	SM	A-2-4	0	0	100	100	82-
	10-16	Fine sandy loam, very fine sandy loam, sandy loam, loamy fine sand	SM	A-2-4	0	0	100	100	82-
	16-42	Fine sandy loam, very fine sandy loam, sandy loam, loam	SC, CL, ML, SM	A-4, A-6	0	0	100	100	82-
	42-80	Loamy fine sand, very fine sand, fine sandy loam, fine sand	SM	A-2-4	0	0	98-100	92-100	86-

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage sieve num		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	
	In				Pct	Pct			
142A:									
Patton	0-15	Silty clay loam	CL	A-7-6, A-6	0	0	100	98-100	94
	15-35	Silty clay loam	CL	A-6, A-7-6	0	0	100	91-100	87
	35-60	Stratified silty clay loam to silt loam	CL	A-6, A-4	0	0	100	77-100	71
142A+:									
Patton, overwash	0-15	Silt loam	CL	A-6	0	0	100	98-100	94
	15-35	Silty clay loam	CL	A-6, A-7-6	0	0	100	91-100	87
	35-60	Stratified silty clay loam to silt loam	CL	A-6, A-4	0	0	100	77-100	71
164A:									
Stoy	0-13	Silt loam	ML, CL	A-6, A-4	0	0	100	100	93
	13-32	Silty clay loam	CL	A-6, A-7-6	0	0	100	100	96
	32-45	Silty clay loam	CL	A-7-6, A-6	0	0	100	100	96
	45-80	Silt loam	CL	A-7-6, A-6	0	0	100	100	94
164B:									
Stoy	0-13	Silt loam	ML, CL	A-6, A-4	0	0	100	100	93
	13-32	Silty clay loam	CL	A-7-6, A-6	0	0	100	100	95
	32-45	Silty clay loam	CL	A-7-6, A-6	0	0	100	100	95
	45-80	Silt loam	CL	A-7-6, A-6	0	0	100	100	95
165A:									
Weir	0-8	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	95
	8-17	Silt loam	CL-ML, CL, ML	A-4	0	0	100	100	95
	17-39	Silty clay loam, silty clay	CL	A-7-6, A-6	0	0	100	100	96
	39-80	Silt loam, silty clay loam	CL	A-6, A-4	0	0	100	100	92

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage sieve num: 4	10	
	In				Pct	Pct			
173A:									
McGary	0-11	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	95
	11-42	Silty clay, silty clay loam	CL, CH	A-7-6	0	0	100	100	90
	42-50	Silty clay, silty clay loam	CL, CH	A-7-6	0	0	100	100	89
	50-60	Stratified silty clay loam to silty clay	CL, CH	A-7-6, A-6	0	0	100	100	95
173B2:									
McGary, eroded	0-8	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	95
	8-42	Silty clay, silty clay loam	CL, CH	A-7-6	0	0	100	100	90
	42-50	Silty clay, silty clay loam	CL, CH	A-7-6	0	0	100	100	89
	50-60	Stratified silty clay loam to silty clay	CL, CH	A-7-6, A-6	0	0	100	100	95
176A:									
Marissa	0-18	Silt loam	ML, CL	A-6, A-4	0	0	100	100	97
	18-43	Silty clay loam	CL, CH	A-6, A-7-6	0	0	100	100	97
	43-60	Silt loam, silty clay loam	ML, CL-ML, CL	A-6, A-4	0	0	100	95-100	89
178A:									
Ruark	0-8	Loam, very fine sandy loam, fine sandy loam	CL-ML	A-4	0	0	100	100	90
	8-19	Loam	CL-ML	A-4	0	0	100	100	90
	19-49	Sandy clay loam, loam, clay loam	CL	A-6, A-4	0	0	100	100	91
	49-65	Loam, sandy loam, sandy clay loam	SC-SM, ML, CL-ML	A-4	0	0	100	98-100	88

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage [cut off] sieve num[cut off]		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	
	In				Pct	Pct			
184A:									
Roby	0-9	Fine sandy loam, sandy loam, loamy fine sand	SM	A-4, A-2-4	0	0	100	100	83
	9-15	Loamy fine sand, fine sandy loam	SM, SC-SM	A-2-4, A-4	0	0	100	100	81
	15-19	Sandy loam, fine sandy loam, loam	CL, SC	A-4	0	0	100	100	77
	19-60	Stratified sand to sandy loam, loamy sand, loamy fine sand, sand, sandy loam	SM	A-2-4	0	0	93-100	85-100	63
208A:									
Sexton	0-8	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	95
	8-12	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	96
	12-36	Silty clay, silty clay loam	MH, CH, CL	A-7-5	0	0	100	100	96
	36-45	Clay loam	CL	A-6	0	0	95-100	85-100	73
	45-78	Stratified sandy loam to loamy sand	SC-SM, SM	A-2-4, A-4	0	0	95-100	84-100	61
	78-80	Silt loam	CL	A-6, A-4	0	0	96-100	86-100	78
214B:									
Hosmer	0-7	Silt loam	ML, CL-ML, CL	A-4	0	0	100	100	94
	7-28	Silt loam, silty clay loam	CL-ML, CL	A-6, A-4	0	0	100	100	90
	28-67	Silty clay loam, silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	94
	67-80	Silt loam	ML, CL-ML, CL	A-4	0	0	100	100	94

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	(cut off)
	In				Pct	Pct			
214B2:									
Hosmer, eroded	0-4	Silt loam	ML, CL-ML, CL	A-4	0	0	100	100	94
	4-25	Silty clay loam, silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	90
	25-64	Silt loam, silty clay loam	CL-ML, CL	A-6, A-4	0	0	100	100	94
	64-80	Silt loam	ML, CL-ML, CL	A-4	0	0	100	100	94
214C2:									
Hosmer, eroded	0-4	Silt loam	ML, CL-ML, CL	A-4	0	0	100	100	94
	4-25	Silt loam, silty clay loam	CL-ML, CL	A-6, A-4	0	0	100	100	90
	25-64	Silty clay loam, silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	94
	64-80	Silt loam	ML, CL-ML, CL	A-4	0	0	100	100	94
214C3:									
Hosmer, severely eroded	0-2	Silt loam, silty clay loam	ML, CL-ML, CL	A-4	0	0	100	100	88
	2-23	Silt loam, silty clay loam	CL-ML, CL	A-6, A-4	0	0	100	100	90
	23-62	Silty clay loam, silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	94
	62-80	Silt loam	ML, CL-ML, CL	A-4	0	0	100	100	94
231A:									
Evansville	0-9	Silt loam	CL-ML, ML	A-6, A-4	0	0	100	100	94
	9-44	Silty clay loam, silt loam	CL, CH	A-6, A-7-6	0	0	100	100	89
	44-66	Stratified silt loam to silty clay loam	CL-ML, CL	A-7-6, A-6, A-4	0	0	100	100	93

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage sieve num: 4	Percentage sieve num: 10	
	In				Pct	Pct			
301B:									
Grantsburg	0-11	Silt loam	ML, CL	A-6, A-4	0	0	100	100	93
	11-24	Silt loam, silty clay loam	CL	A-7-6, A-6, A-4	0	0	100	100	95
	24-38	Silty clay loam, silt loam	ML, CL	A-7-6, A-4	0	0	100	100	94
	38-61	Silt loam, silty clay loam	CL	A-4, A-7-6, A-6	0	0	100	100	94
	61-80	Silt loam	ML, CL	A-6, A-4	0	0	100	100	95
308B:									
Alford	0-10	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	93
	10-44	Silty clay loam, silt loam	CL	A-6	0	0	100	100	90
	44-80	Silt loam	CL-ML, CL, ML	A-4	0	0	100	100	95
308B2:									
Alford, eroded	0-7	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	93
	7-35	Silty clay loam, silt loam	CL	A-6	0	0	100	100	90
	35-80	Silt loam	CL-ML, CL, ML	A-4	0	0	100	100	94
308C2:									
Alford, eroded	0-6	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	93
	6-44	Silty clay loam, silt loam	CL	A-6	0	0	100	100	90
	44-80	Silt loam	CL-ML, CL, ML	A-4	0	0	100	100	95
308C3:									
Alford, severely eroded	0-5	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	100	100	91
	5-44	Silty clay loam, silt loam	CL	A-6	0	0	100	100	90
	44-80	Silt loam	CL-ML, CL, ML	A-4	0	0	100	100	95

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage sieve num: 4	Percentage sieve num: 10	
	In				Pct	Pct			
308D2:									
Alford, eroded------------------	0-6	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	93
	6-44	Silty clay loam, silt loam	CL	A-6	0	0	100	100	90
	44-80	Silt loam	CL-ML, CL, ML	A-4	0	0	100	100	95
308D3:									
Alford, severely eroded---------	0-5	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	100	100	91
	5-44	Silty clay loam, silt loam	CL	A-6	0	0	100	100	90
	44-80	Silt loam	CL-ML, CL, ML	A-4	0	0	100	100	95
337A:									
Creal---------------------------	0-9	Silt loam	ML, CL	A-4, A-6	0	0	100	100	96
	9-27	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	96
	27-55	Silty clay loam	CL	A-7-6, A-6	0	0	100	100	96
	55-80	Silt loam, silty clay loam	CL, ML	A-7-6, A-6	0	0	100	100	99
339F:									
Wellston------------------------	0-8	Silt loam	ML	A-4	0	0	95-100	84-100	79
	8-31	Silt loam, silty clay loam	CL-ML, CL	A-6, A-4	0	0	84-100	63-100	57
	31-43	Channery silt loam, loam, channery loam	SC, SC-SM, CL, CL-ML	A-6, A-4	0	0-8	70-91	49-91	45
	43-60	Very channery loam, channery loam, gravelly sandy loam, channery clay loam	SC-SM, GC, SC, CL, GC-GM	A-6, A-4, A-2-4, A-1-b	0	0-11	59-83	31-83	28
	60-70	Bedrock	---	---	---	---	---	---	-

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage [illegible] sieve num[illegible]: 4	10	[illegible]
	In				Pct	Pct			
340C2:									
Zanesville, eroded-------------	0-4	Silt loam	CL	A-4, A-6	0	0	100	100	92
	4-19	Silt loam, silty clay loam	CL, CL-ML	A-6, A-4	0	0	100	100	91
	19-39	Silt loam, silty clay loam	CL, CL-ML, ML	A-6, A-4	0	0	91-100	78-100	71
	39-57	Channery silt loam, channery silty clay loam, very channery silt loam, channery clay loam, channery sandy clay loam, very channery loam, gravelly loam, gravelly fine sandy loam, sandy clay loam	CL, GM, SC, SM	A-6, A-2-4	0	0-5	73-100	42-100	38
	57-67	Bedrock	---	---	---	---	---	---	-

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage [cut off] sieve num[cut off]		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	
	In				Pct	Pct			
340C3:									
Zanesville, severely eroded----	0-2	Silt loam, silty clay loam	CL	A-4, A-6	0	0	100	100	83
	2-19	Silt loam, silty clay loam	CL, CL-ML	A-6, A-4	0	0	100	100	85
	19-37	Silt loam, silty clay loam	CL, CL-ML, ML	A-6, A-4	0	0-1	91-100	78-100	71
	37-55	Channery silt loam, channery silty clay loam, very channery silt loam, channery clay loam, channery sandy clay loam, very channery loam, gravelly loam, gravelly fine sandy loam	CL, GM, SC, SM	A-6, A-2-4	0	0-7	73-100	41-100	37
	55-65	Bedrock	---	---	---	---	---	---	-

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage [passing] sieve num[ber]--		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	[40]
	In				Pct	Pct			
340D2:									
Zanesville, eroded-------------	0-4	Silt loam	CL	A-4, A-6	0	0	100	100	92
	4-19	Silt loam, silty clay loam	CL, CL-ML	A-6, A-4	0	0	100	100	91
	19-39	Silt loam, silty clay loam	CL, CL-ML, ML	A-6, A-4	0	0	91-100	78-100	71
	39-57	Channery silt loam, channery silty clay loam, very channery silt loam, channery clay loam, channery sandy clay loam, very channery loam, gravelly loam, gravelly fine sandy loam, sandy clay loam	CL, GM, SC, SM	A-6, A-2-4	0	0-5	73-100	42-100	38
	57-67	Bedrock	---	---	---	---	---	---	-

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage sieve num		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	
	In				Pct	Pct			
340D3:									
Zanesville, severely eroded----	0-2	Silt loam, silty clay loam	CL	A-4, A-6	0	0	100	100	83
	2-19	Silt loam, silty clay loam	CL, CL-ML	A-6, A-4	0	0	100	100	85
	19-37	Silt loam, silty clay loam	CL, CL-ML, ML	A-6, A-4	0	0	91-100	78-100	71
	37-55	Channery silt loam, channery silty clay loam, very channery silt loam, channery clay loam, channery sandy clay loam, very channery loam, gravelly loam, gravelly fine sandy loam	CL, GM, SC, SM	A-6, A-2-4	0	0-7	73-100	41-100	37
	55-65	Bedrock	---	---	---	---	---	---	-
434A:									
Ridgway------------------------	0-10	Silt loam	CL-ML, ML, CL	A-4	0	0	100	100	94
	10-30	Silty clay loam	CL	A-7-6, A-6	0	0	100	98-100	93
	30-39	Sandy clay loam, loam, clay loam	ML, CL	A-6	0	0	97-100	83-100	71
	39-80	Stratified loamy sand to sandy loam	SC-SM, SM	A-4, A-2-4	0	0	94-98	82-98	60

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage p sieve numb: 4	10	4
	In				Pct	Pct			
434B:									
Ridgway	0-10	Silt loam	CL-ML, ML, CL	A-4	0	0	100	100	94-
	10-30	Silty clay loam	CL	A-7-6, A-6	0	0	100	98-100	93-
	30-39	Clay loam, loam, sandy clay loam	ML, CL	A-6	0	0	97-100	83-100	71-
	39-80	Stratified loamy sand to sandy loam	SC-SM, SM	A-4, A-2-4	0	0	94-98	82-98	60-
434C2:									
Ridgway	0-8	Silt loam	CL-ML, ML, CL	A-4	0	0	100	100	94-
	8-30	Silty clay loam	CL	A-7-6, A-6	0	0	100	98-100	93-
	30-39	Sandy clay loam, loam, clay loam	ML, CL	A-6	0	0	97-100	83-100	71-
	39-80	Stratified loamy sand to sandy loam	SC-SM, SM	A-4, A-2-4	0	0	94-98	82-98	60-
436A:									
Meadowbank	0-19	Silt loam	ML, CL-ML, CL	A-6, A-4	0	0	100	100	93-
	19-36	Silty clay loam	CL	A-6	0	0	100	100	95-
	36-49	Loam, sandy loam, clay loam	SC-SM, ML, CL	A-6, A-4	0	0	97-100	84-100	74-
	49-80	Sand, loamy sand, sandy loam	SC-SM, SM	A-2-4	0	0	97-100	85-100	71-
436B:									
Meadowbank	0-19	Silt loam	ML, CL-ML, CL	A-6, A-4	0	0	100	100	93-
	19-36	Silty clay loam	CL	A-6	0	0	100	100	95-
	36-49	Loam, sandy loam, clay loam	SC-SM, ML, CL	A-6, A-4	0	0	97-100	84-100	74-
	49-80	Sand, loamy sand, sandy loam	SC-SM, SM	A-2-4	0	0	97-100	85-100	71-

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage p sieve numb		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	4
	In				Pct	Pct			
445A:									
Newhaven	0-15	Loam	CL-ML, CL	A-6, A-4	0	0	100	100	81-
	15-39	Clay loam, loam, sandy clay loam, fine sandy loam	CL	A-7-6, A-6, A-4	0	0	92-100	76-100	59-
	39-80	Stratified fine sandy loam to very fine sand	SC-SM, SM	A-4, A-2-4	0	0	91-100	78-100	72-
446A:									
Springerton	0-19	Loam	CL	A-6, A-4	0	0	100	91-100	84-
	19-45	Clay loam, loam	CL-ML, CL	A-6, A-4	0	0	97-100	91-100	79-
	45-65	Stratified loam to sandy loam	SC, SC-SM, CL, CL-ML	A-4	0	0	97-100	92-100	73-
453B:									
Muren	0-9	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	94-
	9-14	Silt loam, silt	CL-ML, CL	A-6, A-4	0	0	100	100	94-
	14-51	Silty clay loam, silt loam	CL	A-6, A-4	0	0	100	100	88-
	51-80	Silt loam, silt	ML, CL-ML, CL	A-4	0	0	100	100	95-
467B2:									
Markland, eroded	0-6	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	96-
	6-25	Silty clay, silty clay loam	CL, CH	A-7-6	0	0	100	100	87-
	25-42	Silty clay, silty clay loam	CL, CH	A-7-6	0	0	100	100	94-
	42-80	Stratified silty clay loam to silty clay to silt loam	CL-ML, CL, CH	A-7-6, A-6, A-4	0	0	100	100	83-

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage p[...] sieve numb[...]: 4	10	4[...]
	In				Pct	Pct			
467C2:									
Markland, eroded	0-6	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	96-
	6-25	Silty clay, silty clay loam	CL, CH	A-7-6	0	0	100	100	87-
	25-42	Silty clay, silty clay loam	CL, CH	A-7-6	0	0	100	100	94-
	42-80	Stratified silty clay loam to silty clay to silt loam	CL-ML, CL, CH	A-7-6, A-6, A-4	0	0	100	100	83-
467C3:									
Markland, severely eroded	0-4	Silty clay loam	CL	A-7-6, A-6	0	0	100	100	94-
	4-20	Silty clay, silty clay loam	CL, CH	A-7-6	0	0	100	100	87-
	20-42	Silty clay, silty clay loam	CL, CH	A-7-6	0	0	100	100	94-
	42-80	Stratified silty clay loam to silty clay to silt loam	CL-ML, CL, CH	A-7-6, A-6, A-4	0	0	100	100	83-
482B:									
Uniontown	0-9	Silt loam	ML, CL-ML, CL	A-4	0	0	100	90-100	86-
	9-34	Silt loam, silty clay loam	ML, CL	A-7-6, A-6, A-4	0	0	100	90-100	80-
	34-65	Silt loam, silty clay loam	ML, CL	A-7-6, A-6, A-4	0	0	96-100	90-100	88-
482B2:									
Uniontown, eroded	0-8	Silt loam	ML, CL-ML, CL	A-4	0	0	100	90-100	86-
	8-34	Silt loam, silty clay loam	ML, CL	A-7-6, A-6, A-4	0	0	100	90-100	80-
	34-65	Silt loam, silty clay loam	ML, CL	A-7-6, A-6, A-4	0	0	96-100	90-100	88-

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage p… sieve numb…: 4	10	4…
	In				Pct	Pct			
482C2:									
Uniontown, eroded	0-8	Silt loam	ML, CL-ML, CL	A-4	0	0	100	90-100	86-
	8-34	Silt loam, silty clay loam	ML, CL	A-7-6, A-6, A-4	0	0	100	90-100	80-
	34-65	Silt loam, silty clay loam	ML, CL	A-7-6, A-6, A-4	0	0	96-100	90-100	88-
482C3:									
Uniontown, severely eroded	0-7	Silty clay loam	CL	A-7-6, A-6	0	0	100	90-100	86-
	7-34	Silt loam, silty clay loam	ML, CL	A-7-6, A-6, A-4	0	0	100	90-100	80-
	34-60	Silt loam, silty clay loam	ML, CL	A-7-6, A-6, A-4	0	0	96-100	90-100	88-
483A:									
Henshaw	0-12	Silt loam	ML, CL-ML, CL	A-4	0	0	100	100	96-
	12-33	Silty clay loam, silt loam	CL	A-6, A-4	0	0	100	100	88-
	33-80	Silt loam, silty clay loam	CL-ML, CL	A-6, A-4	0	0	100	100	93-
484A:									
Harco	0-17	Silt loam	ML, CL-ML, CL	A-6, A-4	0	0	100	100	94-
	17-39	Silty clay loam, silt loam	CL	A-7-6, A-6	0	0	100	100	93-
	39-61	Silt loam	ML, CL-ML, CL	A-6, A-4	0	0	100	94-100	90-
585F:									
Negley	0-7	Loam	ML, CL-ML, CL	A-6, A-4	0	0	95-100	86-100	70-
	7-34	Clay loam, loam	CL-ML, ML	A-6, A-4	0	0	95-100	86-100	63-
	34-80	Sandy clay loam, loam, gravelly sandy clay loam, clay loam	SC, SC-SM, CL, CL-ML	A-6, A-7-6, A-2, A-4	0-1	0-4	70-100	48-96	38-

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage ... sieve num[ber]: 4	10	
	In				Pct	Pct			
630C3:									
Navlys, severely eroded	0-7	Silty clay loam	CL	A-7-6, A-6	0	0	100	100	96
	7-22	Silty clay loam	CL	A-7-6, A-6	0	0	100	100	98
	22-31	Silt loam	CL	A-6	0	0	100	100	96
	31-80	Silt, silt loam	CL, CL-ML, ML	A-4	0	0	100	100	96
630D3:									
Navlys, severely eroded	0-7	Silty clay loam	CL	A-7-6, A-6	0	0	100	100	96
	7-22	Silty clay loam	CL	A-7-6, A-6	0	0	100	100	98
	22-31	Silt loam	CL	A-6	0	0	100	100	96
	31-80	Silt, silt loam	CL, CL-ML, ML	A-4	0	0	100	100	96
750A:									
Skelton	0-10	Fine sandy loam	CL-ML, CL	A-6, A-4	0	0	96-100	86-100	77
	10-37	Clay loam, sandy clay loam	CL, SC-SM, CL-ML	A-7-6, A-6, A-4	0	0	96-100	87-100	78
	37-80	Clay loam, sandy clay loam, stratified gravelly sandy loam to loamy sand	SM, ML, CL, SC	A-7-6, A-2-4, A-4, A-6	0	0	89-100	53-100	41
750B:									
Skelton	0-10	Fine sandy loam	CL-ML, CL	A-6, A-4	0	0	96-100	86-100	77
	10-37	Clay loam, sandy clay loam	CL, SC-SM, CL-ML	A-7-6, A-6, A-4	0	0	96-100	87-100	78
	37-80	Clay loam, sandy clay loam, stratified gravelly sandy loam to loamy sand	SM, ML, CL, SC	A-7-6, A-2-4, A-4, A-6	0	0	89-100	53-100	41

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage sieve num: 4	Percentage sieve num: 10	Percentage sieve num
	In				Pct	Pct			
750C2:									
Skelton, eroded----------------	0-6	Fine sandy loam	CL-ML, CL	A-6, A-4	0	0	96-100	86-100	77
	6-37	Clay loam, sandy clay loam	CL, SC-SM, CL-ML	A-7-6, A-6, A-4	0	0	96-100	87-100	78
	37-80	Clay loam, sandy clay loam, stratified gravelly sandy loam to loamy sand	SM, ML, CL, SC	A-7-6, A-2-4, A-4, A-6	0	0	89-100	53-100	41
751A:									
Crawleyville-------------------	0-18	Fine sandy loam, loam	ML, SC-SM, CL	A-4	0	0	96-100	91-100	80
	18-60	Sandy clay loam, loam	SC, CL, SC-SM, CL-ML	A-6, A-4	0	0	97-100	91-100	78
784F:									
Berks--------------------------	0-3	Silt loam, loam	GM, CL, CL-ML, ML	A-1-b, A-4	0	0	74-95	34-82	26
	3-20	Channery loam, very channery loam, channery silt loam	GM, GC, SC, SM	A-4, A-1-a	0-5	8-22	60-91	21-82	16
	20-30	Very channery loam, extremely channery loam, very channery silt loam	GM, SM	A-4, A-1-a, A-1-b	0-11	14-23	64-83	28-58	22
	30-34	Bedrock	---	---	---	---	---	---	-
802B:									
Orthents, loamy----------------	0-6	Loam, silt loam	CL	A-4, A-6	0	0	96-100	87-100	75
	6-60	Loam, clay loam, silt loam, fine sandy loam	CL	A-6	0	0-4	96-100	87-100	75
865.									
Pits, gravel									

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage p[assing] sieve numb[er]: 4	10	4
	In				Pct	Pct			
898G:									
Sylvan	0-5	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	98-
	5-10	Silt loam	ML, CL	A-6, A-4	0	0	100	100	97-
	10-27	Silty clay loam, silt loam	CL	A-7-6, A-6	0	0	100	100	94-
	27-80	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	92-
Hickory	0-3	Silt loam	CL-ML, CL, ML	A-4	0	0	90-100	71-100	64-
	3-16	Silt loam	CL-ML, CL, ML	A-4	0	0	90-100	71-100	64-
	16-43	Clay loam, loam	CL	A-6	0	0-1	91-100	68-100	59-
	43-80	Clay loam, loam	SC, CL	A-6, A-4	0	0-1	90-100	66-100	56-
908G:									
Kell	0-3	Silt loam	CL-ML, ML	A-4	0	0-1	94-100	83-100	75-
	3-7	Silt loam, loam	CL-ML, ML	A-4	0	0-1	94-100	83-100	75-
	7-13	Silt loam, clay loam, silty clay loam	CL, CL-ML	A-6, A-4	0	0-1	90-100	69-100	62-
	13-35	Channery clay loam, silty clay loam, very channery silt loam, very channery loam, silt loam	ML, GM, SM	A-4, A-1-b	0-1	0-7	64-91	29-91	25-
	35-60	Bedrock	---	---	---	---	---	---	--
Hickory	0-3	Silt loam	CL-ML, CL, ML	A-4	0	0	98-100	91-100	79-
	3-16	Silt loam	CL-ML, CL, ML	A-4	0	0	98-100	91-100	79-
	16-43	Clay loam, loam	CL	A-6	0	0-1	94-100	72-100	61-
	43-80	Clay loam, loam	CL, SC	A-6, A-4	0	0-1	94-100	72-100	60-
929D3:									
Hickory, severely eroded	0-8	Clay loam	CL	A-7-6, A-6	0	0	98-100	92-100	80-
	8-46	Clay loam, loam	CL	A-7-6, A-6	0	0-1	94-100	71-100	63-
	46-58	Clay loam, loam	CL	A-4, A-6	0	0-1	94-100	72-100	60-
	58-80	Loam, clay loam	SC, CL	A-4, A-6	0	0-1	94-100	72-100	59-

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage p[assing] sieve numb[er]: 4	10	4[0]
	In				Pct	Pct			
929D3:									
Ava, severely eroded-----------	0-9	Silty clay loam	CL	A-6, A-4	0	0	100	100	97-
	9-28	Silty clay loam	CL	A-4, A-6	0	0	100	100	97-
	28-64	Silty clay loam, silt loam	CL	A-6, A-4	0	0	100	94-100	88-
	64-78	Clay loam, silt loam, loam	CL	A-6, A-4	0	0	100	85-100	79-
1288A:									
Petrolia, undrained, frequently flooded------------	0-8	Silty clay loam	CL	A-7-6, A-6	0	0	100	100	93-
	8-55	Silty clay loam	CL	A-6, A-7-6	0	0	100	100	93-
	55-80	Silty clay loam, silt loam	CL	A-6, A-7-6, A-4	0	0	100	100	89-
3092A:									
Sarpy, frequently flooded------	0-8	Sandy loam, loamy sand, sand	SM	A-4, A-2-4	0	0	100	100	71-
	8-60	Stratified sand, stratified fine sand, stratified loamy fine sand, stratified loamy sand	SP-SM, SM	A-2-4	0	0	100	100	77-
3103L:									
Houghton, frequently flooded---	0-60	Muck	PT	A-8	0	0	---	---	--
3108A:									
Bonnie, frequently flooded-----	0-10	Silt loam	CL	A-4, A-6	0	0	100	100	93-
	10-27	Silt loam	CL	A-4, A-6	0	0	100	100	94-
	27-80	Silty clay loam, silt loam	CL	A-6, A-4	0	0	100	100	91-

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage p sieve numb: 4	Percentage p sieve numb: 10	Percentage p sieve numb: 4
	In				Pct	Pct			
3142A:									
Patton, frequently flooded-----	0-15	Silty clay loam	CL	A-6, A-7-6	0	0	100	98-100	94-
	15-35	Silty clay loam	CL	A-6, A-7-6	0	0	100	91-100	87-
	35-60	Stratified silty clay loam to silt loam	CL	A-6, A-4	0	0	100	77-100	71-
3178A:									
Ruark, frequently flooded------	0-8	Loam, very fine sandy loam, fine sandy loam	CL-ML	A-4	0	0	100	100	90-
	8-19	Loam	CL-ML	A-4	0	0	100	100	90-
	19-49	Sandy clay loam, loam, clay loam	CL	A-6, A-4	0	0	100	100	91-
	49-65	Loam, sandy loam, sandy clay loam	SC-SM, ML, CL-ML	A-4	0	0	100	98-100	88-
3231A:									
Evansville, frequently flooded	0-9	Silt loam	CL-ML, ML	A-6, A-4	0	0	100	100	94-
	9-44	Silty clay loam, silt loam	CL, CH	A-6, A-7-6	0	0	100	100	89-
	44-66	Stratified silt loam to silty clay loam	CL-ML, CL	A-6, A-4	0	0	100	100	93-
3302A:									
Ambraw, frequently flooded-----	0-14	Clay loam, loam	CL	A-7-6, A-6	0	0	100	100	87-
	14-37	Clay loam, loam	CH, CL	A-7-6, A-6	0	0	100	100	88-
	37-60	Stratified sandy loam to loam to sandy clay loam	SC, SM, CL, ML	A-6, A-4	0	0	100	90-100	77-

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage p sieve numb: 4	Percentage p sieve numb: 10	Percentage p sieve numb: 4
	In				Pct	Pct			
3304A:									
Landes, frequently flooded-----	0-19	Very fine sandy loam, sandy loam, fine sandy loam	SM, SC-SM, SC, CL-ML	A-4, A-2-4	0	0	100	100	82-
	19-37	Loam, fine sandy loam, loamy sand	CL-ML, SC, SC-SM, SM	A-4, A-2-4	0	0	100	92-100	75-
	37-60	Stratified very fine sand to loamy fine sand to loamy very fine sand to very fine sandy loam	SM, SC-SM, SC	A-4, A-2-4	0	0	100	92-100	71-
3331A:									
Haymond, frequently flooded----	0-20	Silt loam	CL-ML, ML, CL	A-4	0	0	100	100	94-
	20-60	Silt loam	CL-ML, ML, CL	A-4	0	0	100	100	95-
	60-80	Loam, silt loam, fine sandy loam	SM, CL, ML, SC	A-6, A-4	0	0	100	100	83-
3333A:									
Wakeland, frequently flooded---	0-8	Silt loam	CL, ML, CL-ML	A-4	0	0	100	100	95-
	8-68	Silt loam	ML, CL-ML, CL	A-4	0	0	100	100	95-
	68-80	Loam, silt loam	ML, CL-ML, CL	A-4	0	0	100	100	91-
3382A:									
Belknap, frequently flooded----	0-7	Silt loam	CL-ML, ML, CL	A-4	0	0	100	100	95-
	7-59	Silt loam	CL-ML, ML, CL	A-4, A-6	0	0	100	100	95-
	59-80	Silty clay loam, silt loam	CL, CL-ML, ML	A-6, A-4	0	0	100	100	95-
3420A:									
Piopolis, frequently flooded---	0-7	Silty clay loam	CL	A-7-6, A-6	0	0	100	100	95-
	7-37	Silty clay loam	CL	A-7-6, A-6	0	0	100	100	95-
	37-80	Silt loam, silty clay loam	CL	A-7-6, A-6	0	0	100	100	93-

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage p[assing] sieve numb[er]: 4	10	4
	In				Pct	Pct			
3465A:									
Montgomery, frequently flooded	0-15	Silty clay loam, silty clay	CL, CH	A-7-6	0	0	100	100	95-
	15-38	Silty clay, silty clay loam	CH	A-7-6	0	0	100	100	92-
	38-60	Silty clay, silty clay loam, silt loam	CL	A-6	0	0	100	100	85-
3524A:									
Zipp, frequently flooded-------	0-10	Silty clay	CL, CH	A-7-6	0	0	100	100	98-
	10-45	Silty clay, silty clay loam	CL, CH	A-7-6	0	0	100	100	87-
	45-60	Stratified silty clay to silty clay loam	CH, CL	A-7-6, A-6	0	0	100	100	85-
3597A:									
Armiesburg, frequently flooded	0-15	Silty clay loam	CL, CH	A-7-6, A-6	0	0	100	100	87-
	15-67	Silty clay loam	CL, CH	A-7-6, A-6	0	0	100	100	98-
	67-80	Silt loam, silty clay loam	CL, CH	A-7-6, A-6	0	0	100	100	94-
3601A:									
Nolin, frequently flooded------	0-9	Silty clay loam, silt loam	CL	A-6, A-7-6	0	0	100	100	86-
	9-51	Silty clay loam, silt loam	CL	A-7-6, A-6	0	0	100	100	86-
	51-60	Stratified silt loam to loam to fine sandy loam	CL-ML, SC-SM, CL	A-4, A-6	0	0	100	91-100	78-

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage p[...] sieve numb[...]: 4	10	4
	In				Pct	Pct			
3602A:									
Newark, frequently flooded-----	0-9	Silt loam, silty clay loam	CL	A-7-6, A-6	0	0	100	100	96-
	9-32	Silty clay loam, silt loam	CL-ML, CL	A-7-6, A-6, A-4	0	0	100	100	96-
	32-60	Silty clay loam, silt loam	CL-ML, CL	A-7-6, A-6, A-4	0	0	95-100	83-100	76-
3665A:									
Stonelick, frequently flooded--	0-9	Loam	ML, CL-ML, CL	A-6, A-4	0	0	100	100	82-
	9-60	Stratified sand to loamy sand to sandy loam to loam	SC-SM, SM, CL-ML, ML	A-4, A-2-4	0	0	95-100	77-100	66-
7087A:									
Dickinson, rarely flooded------	0-8	Sandy loam	CL-ML, SC-SM, SC, SM	A-6, A-4	0	0	100	100	74-
	8-20	Sandy loam, fine sandy loam	CL, SC-SM, SC	A-6, A-4	0	0	100	100	74-
	20-31	Sandy loam, fine sandy loam	SC-SM, SC	A-6, A-4	0	0	100	100	74-
	31-36	Loamy sand, loamy fine sand, fine sand	SM, SC-SM	A-2-4	0	0	100	100	78-
	36-60	Sand, loamy fine sand, loamy sand	SP-SM, SM	A-2-4	0	0	100	100	77-
7109A:									
Racoon, rarely flooded---------	0-6	Silt loam	CL	A-6, A-4	0	0	100	100	95-
	6-30	Silt loam	CL	A-6, A-4	0	0	100	100	95-
	30-59	Silty clay loam	CL	A-7-6, A-6	0	0	100	100	95-
	59-80	Loam, silty clay loam, silt loam	CL	A-6, A-4	0	0	100	100	95-

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage p sieve numb		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	4
	In				Pct	Pct			
7131A:									
Alvin, rarely flooded----------	0-10	Fine sandy loam, very fine sandy loam	SM	A-2-4	0	0	100	100	82-
	10-16	Fine sandy loam, very fine sandy loam, sandy loam, loamy fine sand	SM	A-2-4	0	0	100	100	82-
	16-42	Fine sandy loam, very fine sandy loam, sandy loam, loam	SC, CL, ML, SM	A-4, A-6	0	0	100	100	82-
	42-80	Loamy fine sand, very fine sand, fine sandy loam, fine sand	SM	A-2-4	0	0	98-100	92-100	86-
7131B:									
Alvin, rarely flooded----------	0-10	Fine sandy loam, very fine sandy loam	SM	A-2-4	0	0	100	100	82-
	10-16	Fine sandy loam, very fine sandy loam, sandy loam, loamy fine sand	SM	A-2-4	0	0	100	100	82-
	16-42	Fine sandy loam, very fine sandy loam, sandy loam, loam	SC, CL, ML, SM	A-4, A-6	0	0	100	100	82-
	42-80	Loamy fine sand, very fine sand, fine sandy loam, fine sand	SM	A-2-4	0	0	98-100	92-100	86-

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage p sieve numb: 4	10	4
	In				Pct	Pct			
7142A:									
Patton, rarely flooded----------	0-15	Silty clay loam	CL	A-7-6, A-6	0	0	100	98-100	94-
	15-35	Silty clay loam	CL	A-6, A-7-6	0	0	100	91-100	87-
	35-60	Stratified silty clay loam to silt loam	CL	A-6, A-4	0	0	100	77-100	71-
7142A+:									
Patton, rarely flooded, overwash----------------------	0-15	Silt loam	CL	A-6	0	0	100	98-100	94-
	0-15	Silt loam	CL	A-6	0	0	100	98-100	94-
	15-35	Silty clay loam	CL	A-6, A-7-6	0	0	100	91-100	87-
	35-60	Stratified silty clay loam to silt loam	CL	A-6, A-4	0	0	100	77-100	71-
7173A:									
McGary, rarely flooded----------	0-11	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	95-
	11-42	Silty clay, silty clay loam	CL, CH	A-7-6	0	0	100	100	90-
	42-50	Silty clay, silty clay loam	CL, CH	A-7-6	0	0	100	100	89-
	50-60	Stratified silty clay loam to silty clay	CL, CH	A-7-6, A-6	0	0	100	100	95-
7173B2:									
McGary, rarely flooded----------	0-8	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	95-
	8-42	Silty clay, silty clay loam	CL, CH	A-7-6	0	0	100	100	90-
	42-50	Silty clay, silty clay loam	CL, CH	A-7-6	0	0	100	100	89-
	50-60	Stratified silty clay loam to silty clay	CL, CH	A-7-6, A-6	0	0	100	100	95-

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage [cut off] sieve num[cut off]: 4	10	
	In				Pct	Pct			
7176A:									
Marissa, rarely flooded	0-18	Silt loam	ML, CL	A-6, A-4	0	0	100	100	97
	18-43	Silty clay loam	CL, CH	A-6, A-7-6	0	0	100	100	97
	43-60	Silt loam, silty clay loam	ML, CL-ML, CL	A-6, A-4	0	0	100	95-100	89
7178A:									
Ruark, rarely flooded	0-8	Loam, very fine sandy loam, fine sandy loam	CL-ML, SC-SM	A-4	0	0	100	100	90
	8-19	Loam	CL-ML, SC-SM	A-4	0	0	100	100	90
	19-49	Sandy clay loam, loam, clay loam	CL	A-6, A-4	0	0	100	100	91
	49-65	Loam, sandy loam, sandy clay loam	SC-SM, ML, CL-ML	A-4	0	0	100	98-100	88
7184A:									
Roby, rarely flooded	0-9	Fine sandy loam, sandy loam, loamy fine sand	SM	A-4, A-2-4	0	0	100	100	83
	9-15	Loamy fine sand, fine sandy loam	SM, SC-SM	A-2-4, A-4	0	0	100	100	81
	15-23	Sandy loam, fine sandy loam, loam	CL, SC	A-4	0	0	100	100	77
	23-60	Stratified sand to sandy loam, loamy sand, loamy fine sand, sand, sandy loam	SM	A-2-4	0	0	93-100	85-100	63

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	(cut off)
	In				Pct	Pct			
7208A:									
Sexton, rarely flooded	0-8	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	95
	8-12	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	96
	12-36	Silty clay, silty clay loam	MH, CH, CL	A-7-6	0	0	100	100	96
	36-45	Clay loam	CL	A-6	0	0	95-100	85-100	73
	45-78	Stratified sandy loam to loamy sand	SC-SM, SM	A-2-4, A-4	0	0	95-100	84-100	61
	78-80	Silt loam	CL	A-6, A-4	0	0	96-100	86-100	78
7434A:									
Ridgway, rarely flooded	0-10	Silt loam	CL-ML, ML, CL	A-4	0	0	100	100	94
	10-30	Silty clay loam	CL	A-7-6, A-6	0	0	100	98-100	93
	30-39	Sandy clay loam, loam, clay loam	ML, CL	A-6	0	0	97-100	83-100	71
	39-80	Stratified sandy loam to loamy sand	SC-SM, SM	A-4, A-2-4	0	0	94-98	82-98	60
7434B:									
Ridgway, rarely flooded	0-10	Silt loam	CL-ML, ML, CL	A-4	0	0	100	100	94
	10-30	Silty clay loam	CL	A-7-6, A-6	0	0	100	98-100	93
	30-39	Clay loam, loam, sandy clay loam	ML, CL	A-6	0	0	97-100	83-100	71
	39-80	Stratified loamy sand to sandy loam	SC-SM, SM	A-4, A-2-4	0	0	94-98	82-98	60
7436A:									
Meadowbank, rarely flooded	0-19	Silt loam	ML, CL-ML, CL	A-6, A-4	0	0	100	100	93
	19-36	Silty clay loam	CL	A-6	0	0	100	100	95
	36-49	Loam, sandy loam, clay loam	SC-SM, ML, CL	A-6, A-4	0	0	97-100	84-100	74
	49-80	Sand, loamy sand, sandy loam	SC-SM, SM	A-2-4	0	0	97-100	85-100	71

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments >10 inches	Fragments 3-10 inches	Percentage [passing] sieve num[ber]: 4	10	
	In				Pct	Pct			
7445A:									
Newhaven, rarely flooded	0-15	Loam	CL-ML, CL	A-6, A-4	0	0	100	100	81
	15-40	Clay loam, loam, sandy clay loam, fine sandy loam	CL	A-7-6, A-6, A-4	0	0	92-100	76-100	59
	40-80	Sandy loam, stratified sandy loam to fine sandy loam to very fine sand	SC-SM, SM	A-4, A-2-4	0	0	91-100	78-100	72
7446A:									
Springerton, rarely flooded	0-19	Loam	CL	A-6, A-4	0	0	100	91-100	84
	19-45	Clay loam, loam	CL-ML, CL	A-6, A-4	0	0	97-100	91-100	79
	45-65	Stratified loam to sandy loam	SC, SC-SM, CL, CL-ML	A-4	0	0	97-100	92-100	73
7462A:									
Sciotoville, rarely flooded	0-8	Silt loam	ML, CL-ML	A-4	0	0	100	96-100	87
	8-24	Silt loam, silty clay loam, loam	CL-ML, CL	A-6, A-4	0	0	100	91-100	81
	24-52	Silt loam, silty clay loam, loam	CL-ML, CL	A-6, A-4	0	0	98-100	92-100	82
	52-80	Stratified silty clay loam to sandy loam	SC, SM, CL, ML	A-2-4, A-6, A-4	0	0	92-100	79-100	54
7462B:									
Sciotoville, rarely flooded	0-8	Silt loam	ML, CL-ML	A-4	0	0	100	96-100	87
	8-24	Silt loam, silty clay loam, loam	CL-ML, CL	A-6, A-4	0	0	100	91-100	81
	24-52	Silt loam, silty clay loam, loam	CL-ML, CL	A-6, A-4	0	0	98-100	92-100	82
	52-80	Stratified silty clay loam to sandy loam	SC, SM, CL, ML	A-2-4, A-6, A-4	0	0	92-100	79-100	54

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number: 4	10	(cut off)
	In				Pct	Pct			
7465A:									
Montgomery, rarely flooded-----	0-15	Silty clay, silty clay loam	CL, CH	A-7-6	0	0	100	100	95
	15-38	Silty clay, silty clay loam	CH	A-7-6	0	0	100	100	92
	38-60	Silty clay loam, silt loam, silty clay	CL	A-6	0	0	100	100	85
7467B2:									
Markland, rarely flooded-------	0-6	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	96
	6-25	Silty clay, silty clay loam	CL, CH	A-7-6	0	0	100	100	87
	25-42	Silty clay, silty clay loam	CL, CH	A-7-6	0	0	100	100	94
	42-80	Stratified silty clay loam to silty clay to silt loam	CL-ML, CL, CH	A-7-6, A-6, A-4	0	0	100	100	83
7467C2:									
Markland, rarely flooded-------	0-6	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	96
	6-25	Silty clay, silty clay loam	CL, CH	A-7-6	0	0	100	100	87
	25-42	Silty clay, silty clay loam	CL, CH	A-7-6	0	0	100	100	94
	42-80	Stratified silty clay loam to silty clay to silt loam	CL-ML, CL, CH	A-7-6, A-6, A-4	0	0	100	100	83

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage p[assing] sieve numb[er]: 4	10	4
	In				Pct	Pct			
7482B:									
Uniontown, rarely flooded------	0-9	Silt loam	ML, CL-ML, CL	A-4	0	0	100	90-100	86-
	9-34	Silt loam, silty clay loam	ML, CL	A-7-6, A-6, A-4	0	0	100	90-100	80-
	34-65	Silt loam, silty clay loam	ML, CL	A-7-6, A-6, A-4	0	0	96-100	90-100	88-
7482C2:									
Uniontown, rarely flooded------	0-8	Silt loam	ML, CL-ML, CL	A-4	0	0	100	90-100	86-
	8-34	Silt loam, silty clay loam	ML, CL	A-7-6, A-6, A-4	0	0	100	90-100	80-
	34-65	Silt loam, silty clay loam	ML, CL	A-7-6, A-6, A-4	0	0	96-100	90-100	88-
7483A:									
Henshaw, rarely flooded--------	0-12	Silt loam	ML, CL-ML, CL	A-4	0	0	100	100	96-
	12-33	Silty clay loam, silt loam	CL	A-6, A-4	0	0	100	100	88-
	33-80	Silt loam, silty clay loam	CL-ML, CL	A-6, A-4	0	0	100	100	93-
7484A:									
Harco, rarely flooded----------	0-17	Silt loam	ML, CL-ML, CL	A-6, A-4	0	0	100	100	94-
	17-39	Silty clay loam, silt loam	CL	A-7-6, A-6	0	0	100	100	93-
	39-61	Silt loam	ML, CL-ML, CL	A-6, A-4	0	0	100	94-100	90-
7524A:									
Zipp, rarely flooded-----------	0-10	Silty clay	CL, CH	A-7-6	0	0	100	100	98-
	10-45	Silty clay, silty clay loam	CL, CH	A-7-6	0	0	100	100	87-
	45-60	Stratified silty clay to silty clay loam	CH, CL	A-7-6, A-6	0	0	100	100	85-

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	4
	In				Pct	Pct			
7524A+:									
Zipp, rarely flooded, overwash	0-17	Silt loam	CL	A-6, A-4	0	0	100	100	95-
	17-60	Silty clay, silty clay loam	CL, CH	A-7-6	0	0	100	100	89-
7750A:									
Skelton, rarely flooded--------	0-10	Fine sandy loam	CL-ML, CL	A-6, A-4	0	0	96-100	86-100	77-
	10-37	Clay loam, sandy clay loam	CL, SC-SM, CL-ML	A-7-6, A-6, A-4	0	0	96-100	87-100	78-
	37-80	Clay loam, sandy clay loam, stratified gravelly sandy loam to loamy sand	SM, ML, CL, SC	A-7-6, A-2-4, A-4, A-6	0	0	89-100	53-100	41-
7750B:									
Skelton, rarely flooded--------	0-10	Fine sandy loam	CL-ML, CL	A-6, A-4	0	0	96-100	86-100	77-
	10-37	Clay loam, sandy clay loam	CL, SC-SM, CL-ML	A-7-6, A-6, A-4	0	0	96-100	87-100	78-
	37-80	Clay loam, sandy clay loam, stratified gravelly sandy loam to loamy sand	SM, ML, CL, SC	A-7-6, A-2-4, A-4, A-6	0	0	89-100	53-100	41-
7750C2:									
Skelton, rarely flooded--------	0-6	Fine sandy loam	CL-ML, CL	A-6, A-4	0	0	96-100	86-100	77-
	6-37	Clay loam, sandy clay loam	CL, SC-SM, CL-ML	A-7-6, A-6, A-4	0	0	96-100	87-100	78-
	37-80	Clay loam, sandy clay loam, stratified gravelly sandy loam to loamy sand	SM, ML, CL, SC	A-7-6, A-2-4, A-4, A-6	0	0	89-100	53-100	41-

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage sieve num		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	
	In				Pct	Pct			
7751A:									
Crawleyville, rarely flooded---	0-18	Fine sandy loam, loam	ML, SC-SM, CL, CL-ML	A-4	0	0	96-100	91-100	80
	18-60	Sandy clay loam, loam	SC, CL, SC-SM, CL-ML	A-6, A-4	0	0	97-100	91-100	78
7787A:									
Banlic, rarely flooded---------	0-8	Silt loam	CL, CL-ML	A-4	0	0	100	100	97
	8-21	Silt loam	CL, CL-ML	A-4	0	0	100	100	97
	21-55	Silt loam, silt	CL, CL-ML	A-4	0	0	100	100	96
	55-80	Silt loam	CL, CL-ML	A-4	0	0	100	100	96
7812E:									
Typic Hapludalfs, rarely flooded----------------------	0-8	Silty clay loam, clay loam	CL	A-7-6, A-6	0	0	95-100	90-100	83
	8-60	Clay loam, silty clay loam, silt loam	SC-SM, CL-ML, CL	A-6, A-4	0	0-2	91-100	75-100	60
8072A:									
Sharon, occasionally flooded---	0-13	Silt loam	CL-ML, CL, ML	A-4	0	0	100	100	94
	13-40	Silt loam	CL-ML, CL, ML	A-4	0	0	100	100	92
	40-80	Silt loam, loam, sandy loam	CL-ML, CL, ML	A-4	0	0	100	100	92
8460A:									
Ginat, occasionally flooded----	0-19	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	93
	19-34	Silt loam, silty clay loam	CL	A-6	0	0	100	100	96
	34-49	Silty clay loam, silt loam	CL	A-7-6, A-6	0	0	100	100	88
	49-80	Silty clay loam, silt loam, clay loam, loam, silty clay	CL	A-7-6, A-6	0	0	100	100	90

Table 20.--Physical Properties of the Soils

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "
apply only to the surface layer. Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Eros Kw
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	
2A:										
Cisne---------------	0-8	1-8	72-83	10-20	1.30-1.50	0.6-2	0.21-0.25	0.0-2.9	1.0-3.0	.37
	8-17	1-8	72-87	10-20	1.40-1.60	0.2-0.6	0.17-0.24	0.0-2.9	0.2-1.5	.55
	17-37	1-8	50-64	35-45	1.30-1.50	0.01-0.2	0.13-0.17	6.0-8.9	0.2-0.5	.37
	37-60	5-30	38-62	20-35	1.50-1.70	0.06-0.2	0.13-0.18	3.0-5.9	0.0-0.5	.37
	60-80	5-30	35-63	20-35	1.50-1.70	0.06-0.2	0.15-0.18	3.0-5.9	0.0-0.3	.43
3A:										
Hoyleton------------	0-8	1-8	65-87	10-27	1.30-1.50	0.6-2	0.20-0.25	0.0-2.9	1.5-3.5	.37
	8-11	1-8	65-87	12-27	1.30-1.50	0.6-2	0.17-0.22	0.0-2.9	0.3-1.5	.49
	11-39	1-8	47-64	35-45	1.30-1.60	0.06-0.2	0.12-0.17	6.0-8.9	0.2-0.5	.37
	39-80	4-30	35-75	19-35	1.40-1.60	0.06-0.2	0.15-0.19	3.0-5.9	0.0-0.3	.43
3B:										
Hoyleton------------	0-8	1-8	65-87	10-27	1.30-1.50	0.6-2	0.20-0.25	0.0-2.9	1.5-3.5	.37
	8-11	1-8	65-87	12-27	1.30-1.50	0.6-2	0.17-0.22	0.0-2.9	0.3-1.5	.49
	11-39	1-8	47-64	35-45	1.30-1.60	0.06-0.2	0.12-0.17	6.0-8.9	0.2-0.5	.37
	39-80	4-30	35-75	19-35	1.40-1.60	0.06-0.2	0.15-0.19	3.0-5.9	0.0-0.3	.43
8D2:										
Hickory, eroded-----	0-10	15-40	40-60	18-27	1.40-1.65	0.6-2	0.20-0.22	0.0-2.9	0.5-1.5	.32
	10-46	20-45	30-50	24-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	0.1-0.5	.28
	46-58	25-49	28-50	15-32	1.50-1.70	0.6-2	0.11-0.19	0.0-2.9	0.0-0.2	.28
	58-80	30-55	25-50	15-30	1.50-1.75	0.6-2	0.10-0.15	0.0-2.9	0.0-0.2	.28
8F:										
Hickory-------------	0-3	15-40	40-65	10-20	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	1.0-3.0	.32
	3-16	15-40	40-65	10-20	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.2-1.0	.37
	16-43	25-50	30-50	15-35	1.50-1.70	0.6-2	0.15-0.19	3.0-5.9	0.1-0.5	.28
	43-80	30-55	25-50	15-30	1.55-1.75	0.6-2	0.11-0.19	0.0-2.9	0.1-0.3	.28
12A:										
Wynoose-------------	0-7	1-8	72-80	10-20	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.43
	7-20	1-8	72-80	10-20	1.30-1.50	0.2-0.6	0.18-0.22	0.0-2.9	0.2-1.5	.55
	20-36	1-8	51-64	35-42	1.30-1.50	0.01-0.06	0.12-0.16	6.0-8.9	0.2-0.5	.37
	36-66	5-30	39-70	25-35	1.50-1.70	0.06-0.2	0.12-0.16	3.0-5.9	0.0-0.3	.37
	66-80	5-40	39-75	20-35	1.50-1.70	0.06-0.2	0.12-0.16	3.0-5.9	0.0-0.3	.43

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter	Eros Kw
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	
13A:										
Bluford-------------	0-7	1-8	74-85	10-18	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.43
	7-20	1-8	70-80	12-25	1.35-1.55	0.2-0.6	0.18-0.22	0.0-2.9	0.2-1.5	.49
	20-35	1-8	50-64	35-45	1.30-1.50	0.06-0.2	0.13-0.17	6.0-8.9	0.2-0.5	.37
	35-60	5-30	40-64	20-35	1.50-1.70	0.06-0.2	0.13-0.16	3.0-5.9	0.0-0.3	.37
13B:										
Bluford-------------	0-7	1-8	74-85	10-18	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.43
	7-20	1-8	70-80	12-25	1.35-1.55	0.2-0.6	0.18-0.22	0.0-2.9	0.2-1.5	.49
	20-35	1-8	50-64	35-45	1.30-1.50	0.06-0.2	0.13-0.17	6.0-8.9	0.2-0.5	.37
	35-60	5-30	40-64	20-35	1.50-1.70	0.06-0.2	0.13-0.16	3.0-5.9	0.0-0.3	.37
13B2:										
Bluford, eroded-----	0-7	1-8	74-85	10-18	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.43
	7-27	1-8	50-64	35-45	1.30-1.50	0.06-0.2	0.13-0.18	6.0-8.9	0.2-0.5	.37
	27-60	5-30	40-64	20-35	1.50-1.75	0.06-0.2	0.11-0.17	3.0-5.9	0.0-0.3	.37
14B:										
Ava-----------------	0-8	1-8	72-83	12-20	1.35-1.55	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.43
	8-18	1-8	73-83	12-20	1.35-1.55	0.2-0.6	0.12-0.20	0.0-2.9	0.2-1.5	.49
	18-36	1-8	58-74	25-35	1.35-1.55	0.06-0.6	0.12-0.20	3.0-5.9	0.2-0.5	.37
	36-53	5-20	50-74	15-30	1.55-1.75	0.01-0.06	0.05-0.10	0.0-2.9	0.0-0.3	.43
	53-80	5-30	44-74	19-30	1.55-1.75	0.06-0.2	0.06-0.10	0.0-2.9	0.0-0.3	.43
14B2:										
Ava, eroded---------	0-9	1-8	66-83	13-26	1.40-1.60	0.6-2	0.21-0.24	0.0-2.9	0.5-2.0	.43
	9-28	1-8	58-72	27-34	1.40-1.60	0.2-0.6	0.12-0.20	3.0-5.9	0.2-0.8	.37
	28-64	5-20	50-75	17-30	1.55-1.80	0.01-0.06	0.05-0.10	0.0-2.9	0.0-0.5	.43
	64-78	5-30	44-70	20-30	1.55-1.75	0.06-0.2	0.06-0.10	0.0-2.9	0.0-0.2	.43
14C2:										
Ava, eroded---------	0-9	1-8	66-83	13-26	1.40-1.60	0.6-2	0.21-0.24	0.0-2.9	1.0-2.0	.43
	9-28	1-8	58-72	27-34	1.40-1.60	0.2-0.6	0.12-0.20	3.0-5.9	0.2-0.8	.37
	28-64	5-20	50-75	17-30	1.55-1.80	0.01-0.06	0.05-0.10	0.0-2.9	0.0-0.5	.43
	64-78	5-30	44-70	20-30	1.55-1.75	0.06-0.2	0.06-0.10	0.0-2.9	0.0-0.2	.43
14C3:										
Ava, severely eroded	0-9	1-8	60-70	27-35	1.35-1.55	0.6-2	0.18-0.20	3.0-5.9	0.5-1.5	.43
	9-28	1-8	58-72	27-35	1.40-1.60	0.2-0.6	0.12-0.20	3.0-5.9	0.2-0.8	.37
	28-64	5-20	55-75	15-30	1.55-1.80	0.01-0.06	0.05-0.10	0.0-2.9	0.0-0.5	.43
	64-78	5-30	44-70	20-30	1.55-1.75	0.06-0.2	0.06-0.10	0.0-2.9	0.0-0.2	.43
15B:										
Parke---------------	0-9	3-15	60-85	12-27	1.30-1.65	0.6-2	0.18-0.24	0.0-2.9	1.0-3.0	.43
	9-38	3-10	60-79	18-30	1.40-1.70	0.6-2	0.14-0.21	3.0-5.9	0.0-0.5	.49
	38-60	38-70	15-52	10-30	1.40-1.70	0.6-2	0.11-0.19	0.0-2.9	0.0-0.5	.20

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Eros
										Kw
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	
15C2:										
Parke, eroded	0-6	3-15	60-85	12-27	1.30-1.65	0.6-2	0.18-0.24	0.0-2.9	1.0-3.0	.43
	6-35	3-10	60-79	18-30	1.40-1.70	0.6-2	0.14-0.21	3.0-5.9	0.0-0.5	.49
	35-80	38-70	15-52	10-30	1.40-1.70	0.6-2	0.11-0.19	0.0-2.9	0.0-0.5	.20
15D2:										
Parke, eroded	0-6	3-15	60-85	12-27	1.30-1.65	0.6-2	0.18-0.24	0.0-2.9	1.0-3.0	.43
	6-35	3-10	60-79	18-30	1.40-1.70	0.6-2	0.14-0.21	3.0-5.9	0.0-0.5	.49
	35-80	38-70	15-52	10-30	1.40-1.70	0.6-2	0.11-0.19	0.0-2.9	0.0-0.5	.20
19F:										
Sylvan	0-5	0-7	69-82	18-24	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43
	5-10	0-7	68-85	15-25	1.25-1.45	0.6-2	0.20-0.22	0.0-2.9	0.2-1.0	.49
	10-27	0-7	58-75	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.2-0.5	.37
	27-80	0-7	66-90	10-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.49
53B:										
Bloomfield	0-5	80-96	2-12	2-10	1.45-1.65	6-20	0.09-0.11	0.0-2.9	1.0-3.0	.02
	5-38	75-95	3-15	2-10	1.45-1.65	6-20	0.08-0.12	0.0-2.9	0.0-1.0	.15
	38-60	75-95	1-15	1-13	1.60-1.80	2-20	0.08-0.12	0.0-2.9	0.0-1.0	.15
53C:										
Bloomfield	0-8	80-96	2-12	2-10	1.45-1.65	6-20	0.09-0.11	0.0-2.9	1.0-3.0	.02
	8-34	75-95	3-15	2-10	1.45-1.65	6-20	0.08-0.12	0.0-2.9	0.0-1.0	.15
	34-60	75-91	4-15	5-13	1.60-1.80	2-20	0.08-0.12	0.0-2.9	0.0-1.0	.15
53D:										
Bloomfield	0-8	80-96	2-12	2-10	1.45-1.65	6-20	0.09-0.11	0.0-2.9	1.0-3.0	.02
	8-34	75-95	3-15	2-10	1.45-1.65	6-20	0.08-0.12	0.0-2.9	0.0-1.0	.15
	34-60	75-91	4-15	5-13	1.60-1.80	2-20	0.08-0.12	0.0-2.9	0.0-1.0	.15
75B:										
Drury	0-6	0-10	70-80	10-20	1.20-1.40	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.43
	6-33	0-10	70-80	18-20	1.25-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.43
	33-80	3-50	35-77	15-20	1.30-1.50	0.6-2	0.12-0.21	0.0-2.9	0.0-0.2	.49
87A:										
Dickinson	0-8	52-70	12-38	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	1.0-2.0	.15
	8-20	52-70	12-38	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	0.5-1.5	.15
	20-31	52-75	10-38	10-15	1.45-1.55	2-6	0.12-0.15	0.0-2.9	0.5-1.0	.24
	31-36	75-90	1-20	4-10	1.55-1.65	6-20	0.08-0.10	0.0-2.9	0.0-0.5	.15
	36-60	75-95	1-20	4-10	1.60-1.70	6-20	0.02-0.04	0.0-2.9	0.0-0.5	.05

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Eros
										Kw
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	
87B:										
Dickinson-----------	0-8	52-70	12-38	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	1.0-2.0	.15
	8-20	52-70	12-38	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	0.5-1.5	.15
	20-31	52-75	10-38	10-15	1.45-1.55	2-6	0.12-0.15	0.0-2.9	0.5-1.0	.24
	31-36	75-90	1-20	4-10	1.55-1.65	6-20	0.08-0.10	0.0-2.9	0.0-0.5	.15
	36-60	75-95	1-20	4-10	1.60-1.70	6-20	0.02-0.04	0.0-2.9	0.0-0.5	.05
109A:										
Racoon--------------	0-6	1-7	69-80	15-24	1.30-1.50	0.2-0.6	0.22-0.24	0.0-2.9	1.0-2.5	.43
	6-30	1-7	69-80	15-24	1.35-1.55	0.2-0.6	0.20-0.22	0.0-2.9	0.2-0.8	.49
	30-59	1-7	60-70	27-35	1.35-1.60	0.06-0.2	0.15-0.20	3.0-5.9	0.1-0.5	.37
	59-80	5-35	45-70	18-30	1.40-1.65	0.2-0.6	0.15-0.20	0.0-2.9	0.0-0.2	.49
131A:										
Alvin---------------	0-10	45-80	3-45	8-19	1.50-1.70	2-6	0.14-0.17	0.0-2.9	0.5-1.0	.24
	10-16	45-85	3-45	8-19	1.50-1.70	2-6	0.10-0.17	0.0-2.9	0.0-0.5	.24
	16-42	35-80	10-40	10-25	1.50-1.70	2-6	0.14-0.18	0.0-2.9	0.0-0.5	.24
	42-80	50-97	0-45	3-10	1.50-1.70	2-6	0.04-0.08	0.0-2.9	0.0-0.3	.24
131B:										
Alvin---------------	0-10	45-80	3-45	8-19	1.50-1.70	2-6	0.14-0.17	0.0-2.9	0.5-1.0	.24
	10-16	45-85	3-45	8-19	1.50-1.70	2-6	0.10-0.17	0.0-2.9	0.0-0.5	.24
	16-42	36-80	10-40	10-24	1.50-1.70	2-6	0.14-0.18	0.0-2.9	0.0-0.5	.24
	42-80	50-97	0-45	3-10	1.50-1.70	2-6	0.04-0.08	0.0-2.9	0.0-0.3	.24
131C:										
Alvin---------------	0-10	45-80	3-45	8-19	1.50-1.70	2-6	0.14-0.17	0.0-2.9	0.5-1.0	.24
	10-16	45-85	3-45	8-19	1.50-1.70	2-6	0.10-0.17	0.0-2.9	0.0-0.5	.24
	16-42	36-80	10-40	10-24	1.50-1.70	2-6	0.14-0.18	0.0-2.9	0.0-0.5	.24
	42-80	50-97	0-45	3-10	1.50-1.70	2-6	0.04-0.08	0.0-2.9	0.0-0.3	.24
131F:										
Alvin---------------	0-10	45-80	3-45	8-19	1.50-1.70	2-6	0.14-0.17	0.0-2.9	0.5-1.0	.24
	10-16	45-85	3-45	8-19	1.50-1.70	2-6	0.10-0.17	0.0-2.9	0.0-0.5	.24
	16-42	36-80	10-40	10-24	1.50-1.70	2-6	0.14-0.18	0.0-2.9	0.0-0.5	.24
	42-80	50-97	0-45	3-10	1.50-1.70	2-6	0.04-0.08	0.0-2.9	0.0-0.3	.24
142A:										
Patton--------------	0-15	1-9	56-72	27-35	1.20-1.55	0.6-2	0.22-0.24	3.0-5.9	3.0-6.5	.28
	15-35	1-9	56-72	27-35	1.25-1.45	0.6-2	0.18-0.20	3.0-5.9	1.0-3.0	.32
	35-60	5-25	50-75	20-35	1.30-1.75	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.43
142A+:										
Patton, overwash----	0-15	1-9	66-82	15-26	1.20-1.55	0.6-2	0.22-0.24	0.0-2.9	3.0-6.5	.32
	15-35	1-9	56-72	27-35	1.25-1.45	0.6-2	0.18-0.20	3.0-5.9	1.0-3.0	.32
	35-60	5-25	50-75	20-35	1.30-1.75	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.43

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosi Kw
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	
164A:										
Stoy----------------	0-13	0-5	68-88	12-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43
	13-32	0-5	60-73	27-35	1.35-1.55	0.06-0.2	0.18-0.20	3.0-5.9	0.2-1.0	.37
	32-45	0-5	60-73	27-35	1.30-1.60	0.06-0.2	0.09-0.13	3.0-5.9	0.2-0.5	.37
	45-80	0-10	65-80	20-27	1.40-1.75	0.06-0.2	0.10-0.16	3.0-5.9	0.2-0.5	.43
164B:										
Stoy----------------	0-13	0-5	68-88	12-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43
	13-32	0-5	60-73	27-35	1.35-1.55	0.06-0.2	0.18-0.20	3.0-5.9	0.2-1.0	.37
	32-45	0-5	60-73	27-35	1.30-1.60	0.06-0.2	0.09-0.13	3.0-5.9	0.2-0.5	.37
	45-80	0-10	65-80	20-27	1.40-1.75	0.06-0.2	0.10-0.16	3.0-5.9	0.2-0.5	.43
165A:										
Weir----------------	0-8	0-10	70-85	12-20	1.30-1.50	0.2-0.6	0.20-0.24	0.0-2.9	1.0-2.5	.43
	8-17	0-10	70-85	12-20	1.40-1.55	0.06-0.2	0.18-0.22	0.0-2.9	0.1-0.5	.55
	17-39	0-7	53-65	35-45	1.40-1.60	0.01-0.06	0.12-0.16	6.0-8.9	0.0-0.2	.37
	39-80	0-7	60-75	25-39	1.45-1.65	0.06-0.2	0.12-0.18	3.0-5.9	0.0-0.1	.43
173A:										
McGary--------------	0-11	2-10	64-78	20-26	1.30-1.60	0.6-2	0.18-0.24	0.0-2.9	1.0-3.0	.43
	11-42	2-6	40-63	35-55	1.45-1.60	0.06-0.6	0.11-0.18	3.0-5.9	0.0-1.0	.37
	42-50	1-5	40-64	35-55	1.45-1.60	0.01-0.2	0.11-0.18	3.0-5.9	0.0-0.5	.28
	50-60	1-20	40-64	35-50	1.50-1.65	0.01-0.06	0.11-0.18	3.0-5.9	0.0-0.5	.32
173B2:										
McGary, eroded------	0-8	2-10	64-78	20-26	1.30-1.60	0.6-2	0.18-0.24	0.0-2.9	1.0-3.0	.43
	8-42	2-6	40-63	35-55	1.45-1.60	0.06-0.6	0.11-0.18	3.0-5.9	0.0-1.0	.37
	42-50	1-5	40-64	35-55	1.45-1.60	0.01-0.2	0.11-0.18	3.0-5.9	0.0-0.5	.28
	50-60	1-20	40-64	35-50	1.50-1.65	0.01-0.06	0.11-0.18	3.0-5.9	0.0-0.5	.32
176A:										
Marissa-------------	0-18	3-12	61-72	22-27	1.30-1.50	0.2-2	0.22-0.24	3.0-5.9	3.0-4.0	.28
	18-43	3-12	54-67	30-35	1.40-1.60	0.2-2	0.18-0.20	3.0-5.9	0.5-2.0	.37
	43-60	3-12	60-72	18-30	1.45-1.65	0.2-2	0.11-0.22	3.0-5.9	0.0-0.5	.37
178A:										
Ruark---------------	0-8	40-50	30-50	10-20	1.30-1.60	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.24
	8-19	40-50	30-50	10-20	1.30-1.60	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.24
	19-49	35-50	20-40	25-35	1.40-1.60	0.2-0.6	0.15-0.19	0.0-2.9	0.1-0.5	.24
	49-65	35-55	25-50	10-20	1.45-1.65	0.6-2	0.11-0.16	0.0-2.9	0.0-0.3	.24
184A:										
Roby----------------	0-9	57-74	14-31	4-12	1.45-1.65	2-6	0.09-0.13	0.0-2.9	0.5-1.0	.20
	9-15	59-87	0-33	8-15	1.50-1.70	2-6	0.08-0.12	0.0-2.9	0.2-0.5	.24
	15-19	36-72	10-49	15-18	1.45-1.65	2-6	0.14-0.18	0.0-2.9	0.1-0.5	.32
	19-60	75-93	2-19	4-10	1.60-1.80	2-14	0.07-0.11	0.0-2.9	0.0-0.3	.15

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Eros Kw
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	
208A:										
Sexton--------------	0-8	2-14	65-82	15-22	1.30-1.50	0.6-2	0.22-0.24	0.0-2.9	1.0-2.5	.43
	8-12	2-15	71-82	14-22	1.35-1.55	0.2-0.6	0.20-0.22	0.0-2.9	0.3-0.8	.55
	12-36	0-10	47-63	35-45	1.30-1.50	0.06-0.2	0.13-0.17	6.0-8.9	0.2-0.5	.37
	36-45	20-44	23-52	27-40	1.50-1.70	0.2-0.6	0.12-0.16	3.0-5.9	0.2-0.5	.32
	45-78	70-85	5-22	5-14	1.55-1.75	2-6	0.07-0.11	0.0-2.9	0.1-0.3	.10
	78-80	15-30	50-70	15-27	1.50-1.70	0.2-0.6	0.15-0.19	3.0-5.9	0.1-0.3	.49
214B:										
Hosmer--------------	0-7	0-5	68-88	12-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43
	7-28	0-5	65-82	18-35	1.30-1.50	0.6-2	0.18-0.22	3.0-5.9	0.2-1.0	.43
	28-67	0-5	65-85	15-35	1.60-1.70	0.01-0.06	0.06-0.09	0.0-2.9	0.0-0.2	.43
	67-80	0-10	65-85	15-27	1.50-1.70	0.06-0.2	0.08-0.12	0.0-2.9	0.0-0.2	.43
214B2:										
Hosmer, eroded------	0-4	0-5	68-88	12-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43
	4-25	0-5	65-82	18-35	1.30-1.50	0.6-2	0.18-0.22	3.0-5.9	0.2-1.0	.43
	25-64	0-5	65-85	15-35	1.60-1.70	0.01-0.06	0.06-0.09	0.0-2.9	0.0-0.2	.43
	64-80	0-10	65-85	15-27	1.50-1.70	0.06-0.2	0.22-0.24	0.0-2.9	0.0-0.2	.43
214C2:										
Hosmer, eroded------	0-4	0-5	68-88	12-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43
	4-25	0-5	65-82	18-35	1.30-1.50	0.6-2	0.18-0.22	3.0-5.9	0.2-1.0	.43
	25-64	0-5	65-85	15-35	1.60-1.70	0.01-0.06	0.06-0.09	0.0-2.9	0.0-0.2	.43
	64-80	0-10	65-85	15-27	1.50-1.70	0.06-0.2	0.08-0.12	0.0-2.9	0.0-0.2	.43
214C3:										
Hosmer, severely eroded-------------	0-2	0-5	68-88	12-33	1.20-1.40	0.6-2	0.22-0.24	3.0-5.9	0.5-1.0	.43
	2-23	0-5	65-82	18-35	1.30-1.50	0.6-2	0.18-0.22	3.0-5.9	0.2-1.0	.43
	23-62	0-5	65-85	15-35	1.60-1.70	0.01-0.06	0.06-0.09	0.0-2.9	0.0-0.2	.43
	62-80	0-10	65-85	15-27	1.50-1.70	0.06-0.2	0.08-0.12	0.0-2.9	0.0-0.2	.43
231A:										
Evansville----------	0-9	4-12	62-80	16-26	1.30-1.65	0.6-2	0.18-0.26	0.0-2.9	1.0-3.0	.43
	9-44	4-10	56-76	20-34	1.40-1.70	0.6-2	0.14-0.22	3.0-5.9	0.5-1.0	.37
	44-66	4-10	56-76	20-34	1.40-1.70	0.6-2	0.14-0.21	3.0-5.9	0.0-0.5	.37
301B:										
Grantsburg----------	0-11	0-5	70-80	12-25	1.10-1.40	0.6-2	0.20-0.25	0.0-2.9	1.0-3.0	.43
	11-24	0-5	65-80	20-30	1.30-1.60	0.6-2	0.10-0.20	0.0-2.9	0.1-0.5	.37
	24-38	0-5	60-75	25-35	1.50-1.70	0.2-0.6	0.10-0.20	3.0-5.9	0.0-0.2	.37
	38-61	1-18	62-79	20-32	1.55-1.80	0.01-0.06	0.05-0.10	0.0-2.9	0.0-0.2	.37
	61-80	1-30	43-79	20-27	1.50-1.70	0.06-0.2	0.10-0.20	0.0-2.9	0.0-0.2	.43

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Eros Kw
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	
308B:										
Alford---------------	0-10	0-5	68-85	12-27	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.43
	10-44	0-5	62-80	20-33	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37
	44-80	0-20	60-85	12-22	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.55
308B2:										
Alford, eroded------	0-7	0-5	68-85	12-27	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.43
	7-35	0-5	62-80	20-33	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37
	35-80	0-10	70-85	12-22	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.55
308C2:										
Alford, eroded------	0-6	0-5	68-85	12-27	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.43
	6-44	0-5	62-80	20-33	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37
	44-80	0-20	60-85	12-22	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.55
308C3:										
Alford, severely eroded-------------	0-5	0-5	68-85	12-35	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-1.0	.43
	5-44	0-5	62-80	20-33	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37
	44-80	0-20	60-85	12-22	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.55
308D2:										
Alford, eroded------	0-6	0-5	68-85	12-27	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.43
	6-44	0-5	62-80	20-33	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37
	44-80	0-20	60-85	12-22	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.55
308D3:										
Alford, severely eroded-------------	0-5	0-5	68-85	12-35	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-1.0	.43
	5-44	0-5	62-80	20-33	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37
	44-80	0-20	60-85	12-22	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.55
337A:										
Creal---------------	0-9	1-10	69-80	18-27	1.30-1.50	0.2-0.6	0.22-0.24	0.0-2.9	1.0-3.0	.43
	9-27	1-15	67-80	18-25	1.35-1.60	0.2-0.6	0.18-0.20	0.0-2.9	0.0-0.5	.49
	27-55	1-12	60-71	28-35	1.35-1.60	0.2-0.6	0.18-0.20	3.0-5.9	0.0-0.2	.37
	55-80	1-15	55-70	25-35	1.35-1.60	0.2-0.6	0.18-0.20	0.0-2.9	0.0-0.2	.43
339F:										
Wellston------------	0-8	3-25	50-84	13-27	1.30-1.50	0.6-2	0.18-0.22	0.0-2.9	1.0-3.0	.43
	8-31	3-25	45-79	18-35	1.30-1.65	0.6-2	0.17-0.20	3.0-5.9	0.5-1.0	.43
	31-43	3-40	30-70	15-30	1.30-1.60	0.6-2	0.10-0.14	0.0-2.9	0.0-0.5	.32
	43-60	25-55	30-60	15-30	1.30-1.60	0.6-2	0.06-0.12	0.0-2.9	0.0-0.1	.20
	60-70	---	---	---	---	0.2-2	---	---	---	---

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Eros Kw
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	
340C2:										
Zanesville, eroded--	0-4	0-5	68-88	12-27	1.35-1.40	0.6-2	0.19-0.23	0.0-2.9	1.0-2.0	.43
	4-19	0-20	60-75	20-35	1.35-1.45	0.6-2	0.17-0.22	0.0-2.9	0.5-2.0	.37
	19-39	5-32	50-77	18-33	1.50-1.75	0.01-0.06	0.08-0.12	3.0-5.9	0.0-0.5	.37
	39-57	5-70	10-70	18-40	1.50-1.70	0.2-2	0.08-0.12	0.0-2.9	0.0-0.5	.24
	57-67	---	---	---	---	0.01-0.2	---	---	---	---
340C3:										
Zanesville, severely eroded-------------	0-2	0-5	60-88	12-35	1.35-1.40	0.6-2	0.19-0.23	0.0-2.9	0.5-1.0	.43
	2-19	0-22	55-75	15-35	1.35-1.45	0.6-2	0.17-0.22	3.0-5.9	0.0-0.5	.37
	19-37	5-32	50-77	18-33	1.50-1.75	0.06-0.2	0.08-0.12	3.0-5.9	0.0-0.5	.37
	37-55	5-70	10-70	18-35	1.50-1.70	0.2-2	0.08-0.12	0.0-2.9	0.0-0.5	.24
	55-65	---	---	---	---	0.01-0.2	---	---	---	---
340D2:										
Zanesville, eroded--	0-4	0-5	68-88	12-27	1.35-1.40	0.6-2	0.19-0.23	0.0-2.9	1.0-2.0	.43
	4-19	0-20	60-80	20-35	1.35-1.45	0.6-2	0.17-0.22	0.0-2.9	0.5-2.0	.37
	19-39	5-32	50-77	18-33	1.50-1.75	0.01-0.06	0.08-0.12	3.0-5.9	0.0-0.5	.37
	39-57	5-70	10-70	18-40	1.50-1.70	0.2-2	0.08-0.12	0.0-2.9	0.0-0.5	.24
	57-67	---	---	---	---	0.01-0.2	---	---	---	---
340D3:										
Zanesville, severely eroded-------------	0-2	0-5	60-88	12-35	1.35-1.40	0.6-2	0.19-0.23	0.0-2.9	0.5-1.0	.43
	2-19	0-22	55-75	15-35	1.35-1.45	0.6-2	0.17-0.22	3.0-5.9	0.0-0.5	.37
	19-37	5-32	50-77	18-33	1.50-1.75	0.06-0.2	0.08-0.12	3.0-5.9	0.0-0.5	.37
	37-55	5-70	10-70	18-35	1.50-1.70	0.2-2	0.08-0.12	0.0-2.9	0.0-0.5	.24
	55-65	---	---	---	---	0.01-0.2	---	---	---	---
434A:										
Ridgway-------------	0-10	1-15	65-87	10-20	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.43
	10-30	1-15	50-72	27-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.5-1.5	.37
	30-39	30-50	22-43	25-30	1.50-1.70	0.6-2	0.13-0.17	3.0-5.9	0.0-0.5	.20
	39-80	70-85	5-22	5-14	1.55-1.75	2-6	0.07-0.11	0.0-2.9	0.0-0.3	.15
434B:										
Ridgway-------------	0-10	1-15	65-87	10-20	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.43
	10-30	1-15	50-72	27-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.5-1.5	.37
	30-39	30-50	22-43	25-30	1.50-1.70	0.6-2	0.13-0.17	3.0-5.9	0.0-0.5	.32
	39-80	70-85	5-22	5-14	1.55-1.75	2-6	0.07-0.11	0.0-2.9	0.0-0.3	.15
434C2:										
Ridgway, eroded-----	0-8	1-15	65-87	10-20	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.43
	8-30	1-15	50-72	27-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.5-1.5	.37
	30-39	30-50	22-43	25-30	1.50-1.70	0.6-2	0.13-0.17	3.0-5.9	0.0-0.5	.32
	39-80	70-85	5-22	5-14	1.55-1.75	2-6	0.07-0.11	0.0-2.9	0.0-0.3	.15

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Eros Kw
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	
436A:										
Meadowbank----------	0-19	1-9	64-84	15-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	3.0-5.0	.28
	19-36	1-9	56-72	27-35	1.35-1.55	0.6-2	0.16-0.19	3.0-5.9	0.0-2.0	.32
	36-49	20-50	20-70	10-30	1.45-1.65	0.6-6	0.10-0.18	3.0-5.9	0.0-0.5	.24
	49-80	50-90	1-48	2-9	1.55-1.80	6-20	0.05-0.10	0.0-2.9	0.0-0.5	.17
436B:										
Meadowbank----------	0-19	1-9	64-84	15-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	3.0-5.0	.28
	19-36	1-9	56-72	27-35	1.35-1.55	0.6-2	0.16-0.19	3.0-5.9	0.0-2.0	.32
	36-49	20-50	20-70	10-30	1.45-1.65	0.6-6	0.10-0.18	3.0-5.9	0.0-0.5	.24
	49-80	50-90	1-48	2-9	1.55-1.80	6-20	0.05-0.10	0.0-2.9	0.0-0.5	.17
445A:										
Newhaven------------	0-15	30-50	35-50	10-27	1.40-1.60	0.6-2	0.20-0.24	0.0-2.9	3.0-4.0	.32
	15-39	25-50	20-40	18-35	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.5-1.5	.32
	39-80	67-95	3-20	2-13	1.60-1.80	2-20	0.05-0.10	0.0-2.9	0.1-0.5	.24
446A:										
Springerton---------	0-19	15-40	33-65	20-27	1.40-1.60	0.6-2	0.20-0.24	0.0-2.9	4.0-6.0	.28
	19-45	15-40	22-65	20-38	1.40-1.60	0.6-2	0.15-0.19	0.0-2.9	0.0-1.0	.32
	45-65	25-50	25-60	5-25	1.45-1.70	0.6-2	0.11-0.17	0.0-2.9	0.0-0.5	.24
453B:										
Muren---------------	0-9	0-5	77-85	8-18	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.43
	9-14	0-5	77-85	8-18	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.2-1.0	.49
	14-51	0-5	63-82	18-32	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37
	51-80	0-10	75-85	8-15	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.55
467B2:										
Markland, eroded----	0-6	5-15	59-75	20-26	1.30-1.55	0.6-2	0.18-0.24	0.0-2.9	1.0-3.0	.43
	6-25	2-10	41-63	35-55	1.55-1.65	0.2-0.6	0.12-0.18	3.0-5.9	0.5-1.0	.32
	25-42	2-10	41-63	35-55	1.55-1.65	0.06-0.6	0.12-0.18	3.0-5.9	0.5-1.0	.32
	42-80	2-10	41-75	20-50	1.50-1.65	0.06-0.6	0.12-0.22	3.0-5.9	0.5-1.0	.37
467C2:										
Markland, eroded----	0-6	5-15	59-75	20-26	1.30-1.55	0.6-2	0.18-0.24	0.0-2.9	1.0-3.0	.43
	6-25	2-10	41-63	35-55	1.55-1.65	0.2-0.6	0.12-0.18	3.0-5.9	0.5-1.0	.32
	25-42	2-10	41-63	35-55	1.55-1.65	0.06-0.6	0.12-0.18	3.0-5.9	0.5-1.0	.32
	42-80	2-10	41-75	20-50	1.50-1.65	0.06-0.6	0.12-0.22	3.0-5.9	0.5-1.0	.37
467C3:										
Markland, severely eroded------------	0-4	2-15	51-71	27-39	1.40-1.60	0.6-2	0.16-0.21	3.0-5.9	0.5-2.0	.43
	4-20	2-10	41-63	35-55	1.55-1.65	0.2-0.6	0.12-0.18	3.0-5.9	0.5-1.0	.32
	20-42	2-10	41-63	35-55	1.55-1.65	0.06-0.6	0.12-0.18	3.0-5.9	0.5-1.0	.32
	42-80	2-10	41-75	20-50	1.50-1.65	0.06-0.6	0.12-0.22	3.0-5.9	0.5-1.0	.37

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Eros Kw
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	
482B:										
Uniontown-----------	0-9	1-22	60-86	12-20	1.20-1.40	0.6-2	0.19-0.33	0.0-2.9	1.0-3.0	.43
	9-34	1-22	60-81	18-35	1.20-1.40	0.6-2	0.18-0.22	3.0-5.9	0.0-0.5	.37
	34-65	1-22	60-81	18-30	1.20-1.40	0.2-2	0.18-0.22	0.0-2.9	0.0-0.5	.37
482B2:										
Uniontown, eroded---	0-8	1-22	60-86	12-20	1.20-1.40	0.6-2	0.19-0.33	0.0-2.9	0.5-2.0	.43
	8-34	1-22	60-81	18-35	1.20-1.40	0.6-2	0.18-0.22	3.0-5.9	0.0-0.5	.37
	34-65	1-22	60-81	18-30	1.20-1.40	0.2-2	0.18-0.22	0.0-2.9	0.0-0.5	.37
482C2:										
Uniontown, eroded---	0-8	1-22	60-86	12-20	1.20-1.40	0.6-2	0.19-0.33	0.0-2.9	0.5-2.0	.43
	8-34	1-22	60-81	18-35	1.20-1.40	0.6-2	0.18-0.22	3.0-5.9	0.0-0.5	.37
	34-65	1-22	60-81	18-30	1.20-1.40	0.2-2	0.18-0.22	0.0-2.9	0.0-0.5	.37
482C3:										
Uniontown, severely eroded-------------	0-7	1-13	60-72	27-35	1.20-1.40	0.6-2	0.18-0.22	0.0-2.9	0.5-1.5	.37
	7-34	1-22	60-81	18-35	1.20-1.40	0.6-2	0.18-0.22	3.0-5.9	0.0-0.5	.37
	34-60	1-22	60-81	18-30	1.20-1.40	0.2-2	0.18-0.22	0.0-2.9	0.0-0.5	.37
483A:										
Henshaw-------------	0-12	1-25	50-80	12-27	1.20-1.40	0.6-2	0.18-0.23	0.0-2.9	0.5-2.0	.43
	12-33	1-25	50-80	18-34	1.20-1.40	0.2-0.6	0.15-0.19	0.0-2.9	0.0-0.5	.32
	33-80	1-35	50-80	15-34	1.20-1.40	0.2-0.6	0.17-0.22	0.0-2.9	0.0-0.5	.49
484A:										
Harco---------------	0-17	5-20	50-75	20-30	1.20-1.35	0.6-2	0.22-0.24	3.0-5.9	3.0-5.0	.32
	17-39	5-20	45-71	24-35	1.25-1.45	0.6-2	0.18-0.20	3.0-5.9	0.5-1.0	.32
	39-61	5-20	53-75	20-27	1.30-1.50	0.6-2	0.20-0.22	3.0-5.9	0.5-1.0	.32
585F:										
Negley--------------	0-7	26-50	30-50	12-24	1.30-1.50	0.6-2	0.16-0.22	0.0-2.9	1.0-3.0	.32
	7-34	24-50	24-50	14-35	1.30-1.60	0.6-2	0.10-0.16	0.0-2.9	0.0-0.5	.28
	34-80	30-60	12-35	22-38	1.20-1.60	0.6-6	0.06-0.14	0.0-2.9	0.0-0.5	.20
630C3:										
Navlys, severely eroded-------------	0-7	2-15	55-71	27-31	1.30-1.50	0.6-2	0.13-0.17	3.0-5.9	0.8-2.0	.37
	7-22	2-11	62-70	27-35	1.35-1.55	0.6-2	0.15-0.19	3.0-5.9	0.2-1.0	.37
	22-31	2-15	63-80	18-27	1.30-1.50	0.6-2	0.18-0.22	3.0-5.9	0.0-0.5	.55
	31-80	2-15	70-88	10-18	1.40-1.60	0.6-2	0.22-0.26	0.0-2.9	0.0-0.3	.64

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Eros Kw
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	
630D3:										
Navlys, severely eroded-------------	0-7	2-15	55-71	27-31	1.30-1.50	0.6-2	0.13-0.17	3.0-5.9	0.8-2.0	.37
	7-22	2-11	62-70	27-35	1.35-1.55	0.6-2	0.15-0.19	3.0-5.9	0.2-1.0	.37
	22-31	2-15	63-80	18-27	1.30-1.50	0.6-2	0.18-0.22	3.0-5.9	0.0-0.5	.55
	31-80	2-15	70-88	10-18	1.40-1.60	0.6-2	0.22-0.26	0.0-2.9	0.0-0.3	.64
750A:										
Skelton-------------	0-10	40-60	20-40	10-25	1.30-1.60	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.24
	10-37	25-60	15-45	25-34	1.40-1.60	0.6-2	0.15-0.19	0.0-2.9	0.5-1.0	.32
	37-80	25-75	10-45	10-32	1.50-1.70	0.6-6	0.09-0.17	0.0-2.9	0.0-0.5	.32
750B:										
Skelton-------------	0-10	40-60	20-40	10-25	1.30-1.60	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.24
	10-37	25-60	15-45	25-34	1.40-1.60	0.6-2	0.15-0.19	0.0-2.9	0.5-1.0	.32
	37-80	25-75	10-45	10-32	1.50-1.70	0.6-6	0.09-0.17	0.0-2.9	0.0-0.5	.32
750C2:										
Skelton, eroded-----	0-6	40-60	20-40	10-25	1.30-1.60	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.24
	6-37	25-60	15-45	25-34	1.40-1.60	0.6-2	0.15-0.19	0.0-2.9	0.5-1.0	.32
	37-80	25-75	10-45	10-32	1.50-1.70	0.6-6	0.09-0.17	0.0-2.9	0.0-0.5	.32
751A:										
Crawleyville--------	0-18	40-60	20-40	10-20	1.30-1.45	0.6-2	0.16-0.22	0.0-2.9	1.0-2.5	.24
	18-60	35-60	12-42	18-30	1.40-1.65	0.6-2	0.16-0.19	0.0-2.9	0.0-1.0	.32
784F:										
Berks---------------	0-3	3-50	30-75	5-23	1.20-1.50	0.6-6	0.08-0.12	0.0-2.9	2.0-4.0	.28
	3-20	8-50	40-60	5-32	1.20-1.60	0.6-6	0.04-0.10	0.0-2.9	0.0-0.5	.17
	20-30	35-75	10-60	5-20	1.20-1.60	2-6	0.04-0.10	0.0-2.9	0.0-0.5	.17
	30-34	---	---	---	---	0.2-20	---	---	---	---
802B:										
Orthents, loamy-----	0-6	10-60	30-60	10-30	1.70-1.75	0.2-0.6	0.18-0.22	0.0-2.9	0.5-1.0	.32
	6-60	10-60	30-60	10-30	1.70-1.80	0.2-0.6	0.16-0.20	0.0-2.9	0.1-0.5	.32
865.										
Pits, gravel										
898G:										
Sylvan--------------	0-5	0-7	69-82	18-24	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43
	5-10	0-7	68-85	15-25	1.25-1.45	0.6-2	0.20-0.22	0.0-2.9	0.2-1.0	.49
	10-27	0-7	58-75	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.2-0.5	.37
	27-80	0-7	66-90	10-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.49

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Eros Kw
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	
898G:										
Hickory-------------	0-3	20-40	50-70	10-20	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	1.0-3.0	.32
	3-16	20-40	50-70	10-20	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.2-1.0	.37
	16-43	25-50	25-45	25-35	1.50-1.70	0.6-2	0.15-0.19	3.0-5.9	0.1-0.5	.28
	43-80	30-50	30-45	10-28	1.55-1.75	0.6-2	0.11-0.19	0.0-2.9	0.1-0.3	.28
908G:										
Kell----------------	0-3	10-30	50-70	15-27	1.25-1.35	0.6-2	0.18-0.22	0.0-2.9	1.0-3.0	.32
	3-7	10-30	48-70	15-27	1.25-1.40	0.6-2	0.18-0.20	0.0-2.9	0.2-1.0	.37
	7-13	10-25	40-65	22-35	1.35-1.50	0.6-2	0.15-0.18	3.0-5.9	0.2-0.5	.28
	13-35	10-50	40-60	10-40	1.40-1.55	0.6-2	0.10-0.15	0.0-2.9	0.1-0.3	.28
	35-60	---	---	---	---	0.01-2	---	---	---	---
Hickory-------------	0-3	15-40	40-65	10-20	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	1.0-3.0	.32
	3-16	15-40	40-65	10-20	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.2-1.0	.37
	16-43	25-50	30-50	15-35	1.50-1.70	0.6-2	0.15-0.19	3.0-5.9	0.1-0.5	.28
	43-80	30-55	25-50	15-30	1.55-1.75	0.6-2	0.11-0.19	0.0-2.9	0.1-0.3	.28
929D3:										
Hickory, severely eroded------------	0-8	20-43	30-50	27-35	1.40-1.65	0.6-2	0.17-0.19	3.0-5.9	0.5-1.0	.24
	8-46	20-45	30-50	24-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	0.1-0.5	.28
	46-58	25-49	28-50	15-32	1.50-1.70	0.6-2	0.11-0.19	0.0-2.9	0.0-0.2	.28
	58-80	30-55	25-50	15-30	1.50-1.75	0.6-2	0.10-0.15	0.0-2.9	0.0-0.2	.28
Ava, severely eroded	0-9	1-8	60-70	27-35	1.35-1.55	0.6-2	0.18-0.20	2.9-5.9	0.5-1.5	.43
	9-28	1-8	58-72	27-35	1.40-1.60	0.2-0.6	0.12-0.20	2.9-5.9	0.2-0.8	.37
	28-64	5-20	55-75	15-30	1.55-1.80	0.01-0.06	0.05-0.10	0.0-2.9	0.0-0.5	.43
	64-78	5-30	44-70	20-30	1.55-1.75	0.06-0.2	0.06-0.10	0.0-2.9	0.0-0.2	.43
1288A:										
Petrolia, undrained, frequently flooded	0-8	0-19	46-70	27-35	1.20-1.40	0.2-0.6	0.21-0.23	3.0-5.9	2.0-3.0	.32
	8-55	0-19	46-70	27-35	1.35-1.45	0.2-0.6	0.18-0.20	3.0-5.9	0.2-1.0	.32
	55-80	0-40	40-80	15-35	1.40-1.60	0.2-0.6	0.18-0.20	3.0-5.9	0.2-1.0	.32
3092A:										
Sarpy, frequently flooded------------	0-8	60-88	10-35	2-10	1.20-1.50	6-20	0.05-0.09	0.0-2.9	0.5-1.0	.02
	8-60	70-95	0-28	2-5	1.20-1.50	6-20	0.05-0.09	0.0-2.9	0.0-0.5	.02
3103L:										
Houghton, frequently flooded------------	0-60	---	---	---	0.15-0.45	0.2-6	0.35-0.45	---	70-100	---

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Eros Kw
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	
3108A:										
Bonnie, frequently flooded	0-10	1-32	50-80	18-27	1.30-1.50	0.6-2	0.22-0.25	0.0-2.9	1.0-3.0	.43
	10-27	1-32	50-80	18-27	1.40-1.60	0.2-0.6	0.21-0.24	0.0-2.9	0.0-1.0	.49
	27-80	3-42	40-79	18-30	1.40-1.60	0.2-0.6	0.14-0.24	0.0-2.9	0.0-1.0	.49
3142A:										
Patton, frequently flooded	0-15	1-9	56-72	27-35	1.20-1.55	0.6-2	0.22-0.24	3.0-5.9	3.0-6.5	.28
	15-35	1-9	56-72	27-35	1.25-1.45	0.6-2	0.18-0.20	3.0-5.9	1.0-3.0	.32
	35-60	5-25	50-75	20-35	1.30-1.75	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.43
3178A:										
Ruark, frequently flooded	0-8	40-50	30-50	10-20	1.30-1.60	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.24
	8-19	40-50	30-50	10-20	1.30-1.60	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.24
	19-49	35-50	20-40	25-35	1.40-1.60	0.2-0.6	0.15-0.19	0.0-2.9	0.1-0.5	.24
	49-65	35-55	25-50	10-20	1.45-1.65	0.6-2	0.11-0.16	0.0-2.9	0.0-0.3	.24
3231A:										
Evansville, frequently flooded	0-9	4-12	62-80	16-26	1.30-1.65	0.6-2	0.18-0.26	0.0-2.9	1.0-3.0	.43
	9-44	4-10	56-76	20-34	1.40-1.70	0.6-2	0.14-0.22	3.0-5.9	0.5-1.0	.37
	44-66	4-10	56-76	20-34	1.40-1.70	0.6-2	0.14-0.21	3.0-5.9	0.0-0.5	.37
3302A:										
Ambraw, frequently flooded	0-14	20-45	20-53	18-35	1.30-1.50	0.6-2	0.15-0.19	3.0-5.9	2.0-4.0	.28
	14-37	20-60	5-53	24-35	1.45-1.70	0.2-0.6	0.15-0.24	3.0-5.9	0.0-1.0	.28
	37-60	25-60	10-45	18-30	1.50-1.70	0.2-0.6	0.10-0.20	3.0-5.9	0.0-1.0	.24
3304A:										
Landes, frequently flooded	0-19	50-80	0-43	7-20	1.40-1.60	2-6	0.13-0.20	0.0-2.9	1.0-2.0	.20
	19-37	50-82	0-45	5-18	1.60-1.70	2-6	0.10-0.15	0.0-2.9	0.0-2.0	.32
	37-60	50-90	0-30	5-15	1.60-1.80	6-20	0.05-0.15	0.0-2.9	0.0-2.0	.02
3331A:										
Haymond, frequently flooded	0-20	1-35	45-85	10-20	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.43
	20-60	1-35	47-85	10-18	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	0.5-2.0	.49
	60-80	1-65	9-80	2-26	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-1.0	.49

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Eros Kw
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	
3333A:										
Wakeland, frequently flooded------------	0-8	1-14	68-85	10-18	1.30-1.50	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43
	8-68	1-14	68-85	10-18	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-1.0	.49
	68-80	3-41	49-85	10-18	1.35-1.55	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49
3382A:										
Belknap, frequently flooded------------	0-7	1-27	65-85	8-18	1.30-1.55	0.2-2	0.22-0.24	0.0-2.9	1.0-3.0	.43
	7-59	1-27	65-85	8-25	1.40-1.60	0.2-2	0.20-0.22	0.0-2.9	0.0-2.0	.49
	59-80	5-27	65-85	8-30	1.35-1.65	0.2-2	0.20-0.22	0.0-2.9	0.0-1.0	.49
3420A:										
Piopolis, frequently flooded------------	0-7	0-25	45-73	27-35	1.20-1.40	0.06-0.2	0.21-0.23	3.0-5.9	1.0-3.0	.32
	7-37	0-25	45-73	27-35	1.40-1.60	0.06-0.2	0.18-0.20	3.0-5.9	0.1-2.0	.32
	37-80	0-30	45-75	25-38	1.50-1.70	0.06-0.2	0.18-0.20	3.0-5.9	0.1-2.0	.32
3465A:										
Montgomery, frequently flooded	0-15	2-12	40-59	34-48	1.40-1.60	0.2-0.6	0.12-0.14	6.0-8.9	3.0-6.0	.28
	15-38	2-12	41-61	35-50	1.40-1.65	0.06-0.2	0.11-0.18	6.0-8.9	1.0-2.0	.28
	38-60	10-27	40-60	25-45	1.50-1.60	0.2-0.6	0.18-0.22	3.0-5.9	0.5-1.0	.32
3524A:										
Zipp, frequently flooded------------	0-10	2-12	41-58	40-48	1.40-1.55	0.2-0.6	0.12-0.15	3.0-5.9	1.0-3.0	.24
	10-45	1-12	41-64	35-55	1.55-1.65	0.06-0.2	0.11-0.13	6.0-8.9	0.5-1.8	.32
	45-60	1-12	41-69	30-50	1.55-1.70	0.01-0.06	0.08-0.12	6.0-8.9	0.0-1.0	.37
3597A:										
Armiesburg, frequently flooded	0-15	0-30	40-80	20-35	1.30-1.45	0.6-2	0.21-0.23	3.0-5.9	2.0-4.0	.28
	15-67	0-30	40-70	30-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	0.5-1.0	.32
	67-80	0-30	40-80	20-35	1.30-1.60	0.6-2	0.16-0.20	3.0-5.9	0.2-1.0	.32
3601A:										
Nolin, frequently flooded------------	0-9	8-20	55-75	17-33	1.35-1.60	0.6-2	0.20-0.23	0.0-2.9	1.0-3.0	.43
	9-51	10-25	55-73	17-33	1.30-1.50	0.6-2	0.18-0.23	0.0-2.9	0.5-2.0	.43
	51-60	10-60	30-65	10-30	1.30-1.50	0.6-6	0.15-0.23	0.0-2.9	0.2-1.0	.43

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Eros Kw
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	
3602A:										
Newark, frequently										
flooded------------	0-9	1-12	53-75	22-35	1.20-1.60	0.6-2	0.20-0.23	0.0-2.9	2.0-4.0	.37
	9-32	1-12	50-77	22-39	1.20-1.60	0.6-2	0.16-0.22	0.0-2.9	0.5-2.0	.43
	32-60	5-20	45-77	18-35	1.30-1.65	0.6-2	0.14-0.20	0.0-2.9	0.2-1.0	.43
3665A:										
Stonelick,										
frequently flooded	0-9	30-50	30-60	8-20	1.35-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.32
	9-60	45-86	1-50	5-13	1.30-1.55	2-6	0.08-0.17	0.0-2.9	0.5-1.0	.24
7087A:										
Dickinson, rarely										
flooded------------	0-8	52-70	12-38	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	1.0-2.0	.20
	8-20	52-70	12-38	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	0.5-1.5	.24
	20-31	52-75	10-38	10-15	1.45-1.55	2-6	0.12-0.15	0.0-2.9	0.5-1.0	.24
	31-36	75-90	1-20	4-10	1.55-1.65	6-20	0.08-0.10	0.0-2.9	0.0-0.5	.10
	36-60	75-95	1-20	4-10	1.60-1.70	6-20	0.02-0.04	0.0-2.9	0.0-0.5	.05
7109A:										
Racoon, rarely										
flooded------------	0-6	1-7	68-80	18-27	1.30-1.50	0.2-0.6	0.22-0.24	0.0-2.9	1.0-2.5	.43
	6-30	1-7	68-80	18-27	1.35-1.55	0.2-0.6	0.20-0.22	0.0-2.9	0.2-0.8	.49
	30-59	1-7	60-70	27-35	1.35-1.60	0.06-0.2	0.15-0.20	3.0-5.9	0.1-0.5	.37
	59-80	5-35	45-70	18-30	1.40-1.65	0.2-0.6	0.15-0.20	3.0-5.9	0.0-0.2	.49
7131A:										
Alvin, rarely										
flooded------------	0-10	45-80	3-45	8-19	1.50-1.70	2-6	0.14-0.17	0.0-2.9	0.5-1.0	.24
	10-16	45-85	3-45	8-19	1.50-1.70	2-6	0.10-0.17	0.0-2.9	0.0-0.5	.24
	16-42	36-80	10-40	10-24	1.50-1.70	2-6	0.14-0.18	0.0-2.9	0.0-0.5	.24
	42-80	50-97	0-45	3-10	1.50-1.70	2-6	0.04-0.08	0.0-2.9	0.0-0.3	.24
7131B:										
Alvin, rarely										
flooded------------	0-10	45-80	3-45	8-19	1.50-1.70	2-6	0.14-0.17	0.0-2.9	0.5-1.0	.24
	10-16	45-85	3-45	8-19	1.50-1.70	2-6	0.10-0.17	0.0-2.9	0.0-0.5	.24
	16-42	36-80	10-40	10-24	1.50-1.70	2-6	0.14-0.18	0.0-2.9	0.0-0.5	.24
	42-80	50-97	0-45	3-10	1.50-1.70	2-6	0.04-0.08	0.0-2.9	0.0-0.3	.24
7142A:										
Patton, rarely										
flooded------------	0-15	1-9	56-72	27-35	1.20-1.55	0.6-2	0.22-0.24	3.0-5.9	3.0-6.5	.28
	15-35	1-9	56-72	27-35	1.25-1.45	0.6-2	0.18-0.20	3.0-5.9	1.0-3.0	.32
	35-60	5-25	50-75	20-35	1.30-1.75	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.43

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Eros Kw
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	
7142A+:										
Patton, rarely flooded, overwash	0-15	1-9	66-82	15-26	1.20-1.55	0.6-2	0.22-0.24	0.0-2.9	3.0-6.5	.32
	15-35	1-9	56-72	27-35	1.25-1.45	0.6-2	0.18-0.20	3.0-5.9	1.0-3.0	.32
	35-60	5-25	50-75	20-35	1.30-1.75	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.43
7173A:										
McGary, rarely flooded	0-11	2-10	64-78	20-26	1.30-1.60	0.6-2	0.18-0.24	0.0-2.9	1.0-3.0	.43
	11-42	2-6	40-63	35-55	1.45-1.60	0.06-0.6	0.11-0.18	3.0-5.9	0.0-1.0	.37
	42-50	1-5	40-64	35-55	1.45-1.60	0.01-0.2	0.11-0.18	3.0-5.9	0.0-0.5	.28
	50-60	1-20	40-64	35-50	1.50-1.65	0.01-0.06	0.11-0.18	3.0-5.9	0.0-0.5	.32
7173B2:										
McGary, rarely flooded	0-8	2-10	64-78	20-26	1.30-1.60	0.6-2	0.18-0.24	0.0-2.9	1.0-3.0	.43
	8-42	2-6	40-63	35-55	1.45-1.60	0.06-0.6	0.11-0.18	3.0-5.9	0.0-1.0	.37
	42-50	1-5	40-64	35-55	1.45-1.60	0.01-0.2	0.11-0.18	3.0-5.9	0.0-0.5	.28
	50-60	1-20	40-64	35-50	1.50-1.65	0.01-0.06	0.11-0.18	3.0-5.9	0.0-0.5	.32
7176A:										
Marissa, rarely flooded	0-18	3-12	61-72	22-27	1.30-1.50	0.2-2	0.22-0.24	3.0-5.9	3.0-4.0	.28
	18-43	3-12	54-67	30-35	1.40-1.60	0.2-2	0.18-0.20	3.0-5.9	0.5-2.0	.37
	43-60	3-12	60-72	18-30	1.45-1.65	0.2-2	0.11-0.22	3.0-5.9	0.0-0.5	.37
7178A:										
Ruark, rarely flooded	0-8	40-50	30-50	10-20	1.30-1.60	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.24
	8-19	40-50	30-50	10-20	1.30-1.60	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.24
	19-49	35-50	20-40	25-35	1.40-1.60	0.2-0.6	0.15-0.19	0.0-2.9	0.1-0.5	.24
	49-65	35-55	25-50	10-20	1.45-1.65	0.6-2	0.11-0.16	0.0-2.9	0.0-0.3	.24
7184A:										
Roby, rarely flooded	0-9	57-74	14-31	4-12	1.45-1.65	2-6	0.09-0.13	0.0-2.9	0.5-1.0	.20
	9-15	59-87	0-33	8-15	1.50-1.70	2-6	0.08-0.12	0.0-2.9	0.2-0.5	.24
	15-23	36-72	10-49	15-18	1.45-1.65	2-6	0.14-0.18	0.0-2.9	0.1-0.5	.32
	23-60	75-93	2-19	4-10	1.60-1.80	2-14	0.07-0.11	0.0-2.9	0.0-0.3	.15

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Eros Kw
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	
7208A:										
Sexton, rarely										
flooded------------	0-8	2-14	65-82	15-22	1.30-1.50	0.6-2	0.22-0.24	0.0-2.9	1.0-2.5	.43
	8-12	2-15	71-82	14-22	1.35-1.55	0.2-0.6	0.20-0.22	0.0-2.9	0.3-0.8	.55
	12-36	0-10	47-63	35-45	1.30-1.50	0.06-0.2	0.13-0.17	6.0-8.9	0.2-0.5	.37
	36-45	20-44	23-52	27-40	1.50-1.70	0.2-0.6	0.12-0.16	3.0-5.9	0.2-0.5	.32
	45-78	70-85	5-22	5-14	1.55-1.75	2-6	0.07-0.11	0.0-2.9	0.1-0.3	.10
	78-80	15-30	50-70	15-27	1.50-1.70	0.2-0.6	0.15-0.19	3.0-5.9	0.1-0.3	.49
7434A:										
Ridgway, rarely										
flooded------------	0-10	1-15	65-87	10-20	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.43
	10-30	1-15	50-72	27-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.5-1.5	.37
	30-39	30-50	22-43	25-30	1.50-1.70	0.6-2	0.13-0.17	3.0-5.9	0.0-0.5	.20
	39-80	70-85	5-22	5-14	1.55-1.75	2-6	0.07-0.11	0.0-2.9	0.0-0.3	.15
7434B:										
Ridgway, rarely										
flooded------------	0-10	1-15	65-87	10-20	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.43
	10-30	1-15	50-72	27-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.5-1.5	.37
	30-39	30-50	22-43	25-30	1.50-1.70	0.6-2	0.13-0.17	3.0-5.9	0.0-0.5	.32
	39-80	70-85	5-22	5-14	1.55-1.75	2-6	0.07-0.11	0.0-2.9	0.0-0.3	.15
7436A:										
Meadowbank, rarely										
flooded------------	0-19	1-9	64-84	15-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	3.0-5.0	.28
	19-36	1-9	56-72	27-35	1.35-1.55	0.6-2	0.16-0.19	3.0-5.9	0.0-2.0	.32
	36-49	20-50	20-70	10-30	1.45-1.65	0.6-6	0.10-0.18	0.0-2.9	0.0-0.5	.24
	49-80	50-90	1-48	2-9	1.55-1.80	6-20	0.05-0.10	0.0-2.9	0.0-0.5	.17
7445A:										
Newhaven, rarely										
flooded------------	0-15	30-50	35-50	10-27	1.40-1.60	0.6-2	0.20-0.24	0.0-2.9	3.0-4.0	.32
	15-40	25-50	20-40	18-35	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.5-1.5	.32
	40-80	67-95	3-20	2-13	1.60-1.80	2-20	0.05-0.10	0.0-2.9	0.1-0.5	.24
7446A:										
Springerton, rarely										
flooded------------	0-19	15-40	33-65	20-27	1.40-1.60	0.6-2	0.20-0.24	0.0-2.9	4.0-6.0	.28
	19-45	15-40	22-65	20-38	1.40-1.60	0.6-2	0.15-0.19	0.0-2.9	0.0-1.0	.32
	45-65	25-50	25-60	5-25	1.45-1.70	0.6-2	0.11-0.17	0.0-2.9	0.0-0.5	.24

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Eros Kw
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	
7462A:										
Sciotoville, rarely flooded	0-8	5-35	50-70	15-27	1.30-1.45	0.6-2	0.18-0.22	0.0-2.9	1.0-3.0	.37
	8-24	5-45	30-70	20-35	1.40-1.60	0.6-2	0.17-0.21	0.0-2.9	0.0-0.5	.37
	24-52	5-45	30-70	20-35	1.60-1.80	0.06-0.6	0.10-0.14	3.0-5.9	0.0-0.5	.32
	52-80	5-70	15-60	15-35	1.50-1.65	2-6	0.10-0.14	3.0-5.9	0.0-0.5	.37
7462B:										
Sciotoville, rarely flooded	0-8	5-35	50-70	15-27	1.30-1.45	0.6-2	0.18-0.22	0.0-2.9	1.0-3.0	.37
	8-24	5-45	30-70	20-35	1.40-1.60	0.6-2	0.17-0.21	0.0-2.9	0.0-0.5	.37
	24-52	5-45	30-70	20-35	1.60-1.80	0.06-0.6	0.10-0.14	3.0-5.9	0.0-0.5	.32
	52-80	5-70	15-60	15-35	1.50-1.65	2-6	0.10-0.14	3.0-5.9	0.0-0.5	.37
7465A:										
Montgomery, rarely flooded	0-15	2-12	40-59	34-48	1.40-1.60	0.2-0.6	0.12-0.14	6.0-8.9	3.0-6.0	.28
	15-38	2-12	41-61	35-50	1.40-1.65	0.06-0.2	0.11-0.18	6.0-8.9	1.0-2.0	.28
	38-60	10-27	40-60	25-45	1.50-1.60	0.2-0.6	0.18-0.22	3.0-5.9	0.5-1.0	.32
7467B2:										
Markland, rarely flooded	0-6	5-15	59-75	20-26	1.30-1.55	0.6-2	0.18-0.24	0.0-2.9	1.0-3.0	.43
	6-25	2-10	41-63	35-55	1.55-1.65	0.2-0.6	0.12-0.18	3.0-5.9	0.5-1.0	.32
	25-42	2-10	41-63	35-55	1.55-1.65	0.06-0.6	0.12-0.18	3.0-5.9	0.5-1.0	.32
	42-80	2-10	41-75	20-50	1.50-1.65	0.06-0.6	0.12-0.22	3.0-5.9	0.5-1.0	.37
7467C2:										
Markland, rarely flooded	0-6	5-15	59-75	20-26	1.30-1.55	0.6-2	0.18-0.24	0.0-2.9	1.0-3.0	.43
	6-25	2-10	41-63	35-55	1.55-1.65	0.2-0.6	0.12-0.18	3.0-5.9	0.5-1.0	.32
	25-42	2-10	41-63	35-55	1.55-1.65	0.06-0.6	0.12-0.18	3.0-5.9	0.5-1.0	.32
	42-80	2-10	41-75	20-50	1.50-1.65	0.06-0.6	0.12-0.22	3.0-5.9	0.5-1.0	.37
7482B:										
Uniontown, rarely flooded	0-9	1-22	60-86	12-20	1.20-1.40	0.6-2	0.19-0.33	0.0-2.9	1.0-3.0	.43
	9-34	1-22	60-81	18-35	1.20-1.40	0.6-2	0.18-0.22	3.0-5.9	0.0-0.5	.37
	34-65	1-22	60-81	18-30	1.20-1.40	0.2-2	0.18-0.22	0.0-2.9	0.0-0.5	.37
7482C2:										
Uniontown, rarely flooded	0-8	1-22	60-86	12-20	1.20-1.40	0.6-2	0.19-0.33	0.0-2.9	0.5-2.0	.43
	8-34	1-22	60-81	18-35	1.20-1.40	0.6-2	0.18-0.22	3.0-5.9	0.0-0.5	.37
	34-65	1-22	60-81	18-30	1.20-1.40	0.2-2	0.18-0.22	0.0-2.9	0.0-0.5	.37

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Eros Kw
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	
7483A:										
Henshaw, rarely flooded-----------	0-12	1-25	50-80	12-27	1.20-1.40	0.6-2	0.18-0.23	0.0-2.9	0.5-2.0	.43
	12-33	1-25	50-80	18-34	1.20-1.40	0.2-0.6	0.15-0.19	0.0-2.9	0.0-0.5	.32
	33-80	1-35	50-80	15-34	1.20-1.40	0.2-0.6	0.17-0.22	0.0-2.9	0.0-0.5	.49
7484A:										
Harco, rarely flooded-----------	0-17	5-20	50-75	20-30	1.20-1.35	0.6-2	0.22-0.24	3.0-5.9	3.0-5.0	.32
	17-39	5-20	45-71	24-35	1.25-1.45	0.6-2	0.18-0.20	3.0-5.9	0.5-1.0	.32
	39-61	5-20	53-75	20-27	1.30-1.50	0.6-2	0.20-0.22	3.0-5.9	0.5-1.0	.32
7524A:										
Zipp, rarely flooded	0-10	2-12	41-58	40-48	1.40-1.55	0.2-0.6	0.12-0.15	3.0-5.9	1.0-3.0	.24
	10-45	1-12	41-64	35-55	1.55-1.65	0.06-0.2	0.11-0.13	6.0-8.9	0.5-1.8	.32
	45-60	1-12	41-69	30-50	1.55-1.70	0.01-0.06	0.08-0.12	6.0-8.9	0.0-1.0	.37
7524A+:										
Zipp, rarely flooded, overwash--	0-17	5-18	55-74	20-27	1.30-1.65	0.6-2	0.18-0.26	0.0-2.9	1.0-2.5	.37
	17-60	1-12	40-64	35-55	1.55-1.65	0.06-0.2	0.11-0.13	6.0-8.9	0.5-1.5	.32
7750A:										
Skelton, rarely flooded-----------	0-10	40-60	20-40	10-25	1.30-1.60	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.24
	10-37	25-60	15-45	25-34	1.40-1.60	0.6-2	0.15-0.19	0.0-2.9	0.5-1.0	.32
	37-80	25-75	10-45	10-32	1.50-1.70	0.6-6	0.09-0.17	0.0-2.9	0.0-0.5	.32
7750B:										
Skelton, rarely flooded-----------	0-10	40-60	20-40	10-25	1.30-1.60	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.24
	10-37	25-60	15-45	25-34	1.40-1.60	0.6-2	0.15-0.19	0.0-2.9	0.5-1.0	.32
	37-80	25-75	10-45	10-32	1.50-1.70	0.6-6	0.09-0.17	0.0-2.9	0.0-0.5	.32
7750C2:										
Skelton, rarely flooded-----------	0-6	40-60	20-40	10-25	1.30-1.60	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.24
	6-37	25-60	15-45	25-34	1.40-1.60	0.6-2	0.15-0.19	0.0-2.9	0.5-1.0	.32
	37-80	25-75	10-45	10-32	1.50-1.70	0.6-6	0.09-0.17	0.0-2.9	0.0-0.5	.32
7751A:										
Crawleyville, rarely flooded-----------	0-18	40-60	20-40	10-20	1.30-1.45	0.6-2	0.16-0.22	0.0-2.9	1.0-2.5	.24
	18-60	35-60	12-42	18-30	1.40-1.65	0.6-2	0.16-0.19	0.0-2.9	0.0-1.0	.32

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	
7787A:										
Banlic, rarely flooded-----------	0-8	1-15	70-85	12-18	1.40-1.60	0.2-0.6	0.20-0.24	0.0-2.9	1.0-2.0	.43
	8-21	1-15	70-85	12-18	1.40-1.60	0.06-0.2	0.20-0.22	0.0-2.9	0.2-0.8	.49
	21-55	1-15	70-85	10-18	1.65-1.90	0.06-0.2	0.10-0.11	0.0-2.9	0.1-0.5	.49
	55-80	5-15	70-80	12-18	1.50-1.70	0.2-0.6	0.05-0.08	0.0-2.9	0.1-0.3	.55
7812E:										
Typic Hapludalfs, rarely flooded-----	0-8	10-30	35-63	27-35	1.35-1.60	0.06-2	0.18-0.20	3.0-5.9	1.0-3.0	.32
	8-60	10-30	30-80	10-40	1.45-1.80	0.06-6	0.08-0.16	3.0-5.9	0.0-1.0	.43
8072A:										
Sharon, occasionally flooded-----------	0-13	1-50	30-79	10-20	1.30-1.50	0.6-2	0.22-0.24	0.0-2.9	0.5-3.0	.43
	13-40	1-50	30-79	5-20	1.35-1.65	0.6-2	0.18-0.22	0.0-2.9	0.2-0.5	.49
	40-80	1-50	30-79	5-20	1.35-1.65	0.6-2	0.18-0.22	0.0-2.9	0.2-0.5	.49
8460A:										
Ginat, occasionally flooded-----------	0-19	5-15	65-80	12-20	1.30-1.45	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.43
	19-34	5-15	51-73	22-34	1.40-1.60	0.6-2	0.20-0.22	3.0-5.9	0.0-0.5	.32
	34-49	5-25	40-74	21-42	1.60-1.80	0.01-0.06	0.06-0.08	3.0-5.9	0.0-0.5	.32
	49-80	5-25	40-74	21-42	1.40-1.60	0.2-0.6	0.06-0.08	3.0-5.9	0.0-0.5	.32

Table 21.--Chemical Properties of the Soils

(Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Organic matter	Sodium adsorp-tion ratio
	In	meq/100 g	meq/100 g	pH	Pct	Pct	
2A:							
Cisne----------------	0-8	8.0-21	6.0-16	5.1-7.3	0	1.0-3.0	0-1
	8-17	6.0-19	4.5-14	4.5-6.5	0	0.2-1.5	0-2
	17-37	18-30	14-28	4.5-6.0	0	0.2-0.5	0-2
	37-60	12-29	9.0-22	5.1-6.5	0	0.0-0.5	0-5
	60-80	13-28	---	5.6-7.3	0	0.0-0.3	0-10
3A:							
Hoyleton-------------	0-8	11-26	8.0-19	4.5-7.3	0	1.5-3.5	0-2
	8-11	7.0-24	5.0-18	4.5-7.3	0	0.3-1.5	0-2
	11-39	20-37	15-28	4.5-6.5	0	0.2-0.5	0-5
	39-80	15-26	11-20	5.1-7.3	0	0.0-0.3	0-10
3B:							
Hoyleton-------------	0-8	11-26	8.0-19	4.5-7.3	0	1.5-3.5	0-2
	8-11	7.0-24	5.0-18	4.5-7.3	0	0.3-1.5	0-2
	11-39	20-37	15-28	4.5-6.5	0	0.2-0.5	0-5
	39-80	15-26	11-20	5.1-7.3	0	0.0-0.3	0-10
8D2:							
Hickory, eroded------	0-10	10-20	8.0-15	4.5-7.3	0	0.5-1.5	0-2
	10-46	10-19	8.0-14	4.5-6.0	0	0.1-0.5	0-2
	46-58	10-19	8.0-14	4.5-7.3	0	0.0-0.2	0-2
	58-80	8.0-15	---	5.6-8.4	0-10	0.0-0.2	0-2
8F:							
Hickory--------------	0-3	10-20	8.0-15	4.5-6.0	0	1.0-3.0	0-2
	3-16	10-20	8.0-15	4.5-6.0	0	0.2-1.0	0-2
	16-43	10-19	8.0-14	4.5-7.3	0	0.1-0.5	0-2
	43-80	8.0-15	---	5.6-8.4	0-10	0.1-0.3	0-2
12A:							
Wynoose--------------	0-7	8.0-21	6.0-16	5.1-7.3	0	1.0-2.0	0-1
	7-20	8.0-19	5.0-16	4.1-6.0	0	0.2-1.5	0-2
	20-36	21-35	18-32	4.1-6.0	0	0.2-0.5	0-2
	36-66	15-29	12-26	4.1-6.0	0	0.0-0.3	0-5
	66-80	15-29	---	5.6-7.8	0	0.0-0.3	0-10
13A:							
Bluford--------------	0-7	7.0-19	---	5.6-7.3	0	1.0-2.0	0-2
	7-20	8.0-21	5.0-18	4.1-6.0	0	0.2-1.5	0-2
	20-35	21-38	18-35	4.1-6.0	0	0.2-0.5	0-2
	35-60	12-29	9.0-26	4.1-6.0	0	0.0-0.3	0-5
13B:							
Bluford--------------	0-7	7.0-19	---	5.6-7.3	0	1.0-2.0	0-2
	7-20	8.0-21	5.0-18	4.1-6.0	0	0.2-1.5	0-2
	20-35	21-38	18-35	4.1-6.0	0	0.2-0.5	0-2
	35-60	12-29	9.0-26	4.1-6.0	0	0.0-0.3	0-5
13B2:							
Bluford, eroded------	0-7	7.0-19	---	5.6-7.3	0	1.0-2.0	0-2
	7-27	21-38	18-35	4.1-6.0	0	0.2-0.5	0-2
	27-60	12-29	9.0-26	4.1-6.0	0	0.0-0.3	0-5

Table 21.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Organic matter	Sodium adsorp-tion ratio
	In	meq/100 g	meq/100 g	pH	Pct	Pct	
14B:							
Ava------------------	0-8	15-20	11-15	4.5-7.3	0	1.0-2.0	0-1
	8-18	13-19	10-14	4.5-7.3	0	0.2-1.5	0-1
	18-36	---	7.0-20	4.5-5.5	0	0.2-0.5	0-2
	36-53	---	5.0-16	4.5-5.5	0	0.0-0.3	0-5
	53-80	6.0-19	5.0-16	4.5-6.0	0	0.0-0.3	0-5
14B2:							
Ava, eroded----------	0-9	15-20	11-15	4.5-7.3	0	0.5-2.0	0-1
	9-28	---	7.0-20	4.5-5.5	0	0.2-0.8	0-2
	28-64	---	5.0-16	4.5-5.5	0	0.0-0.5	0-5
	64-78	6.0-19	5.0-16	4.5-6.0	0	0.0-0.2	0-5
14C2:							
Ava, eroded----------	0-9	15-20	11-15	4.5-7.3	0	1.0-2.0	0-1
	9-28	---	7.0-20	4.5-5.5	0	0.2-0.8	0-2
	28-64	---	5.0-16	4.5-5.5	0	0.0-0.5	0-5
	64-78	6.0-19	5.0-16	4.5-6.0	0	0.0-0.2	0-5
14C3:							
Ava, severely eroded	0-9	15-20	11-15	4.5-7.3	0	0.5-1.5	0-1
	9-28	---	7.0-20	4.5-5.5	0	0.2-0.8	0-2
	28-64	---	5.0-16	4.5-5.5	0	0.0-0.5	0-5
	64-78	6.0-19	5.0-16	4.5-6.0	0	0.0-0.2	0-5
15B:							
Parke----------------	0-9	10-20	7.0-15	5.1-7.3	0	1.0-3.0	0
	9-38	12-20	9.0-15	4.5-6.5	0	0.0-0.5	0
	38-60	---	5.0-9.0	4.5-5.5	0	0.0-0.5	0-3
15C2:							
Parke, eroded--------	0-6	10-20	7.0-15	5.1-7.3	0	1.0-3.0	0
	6-35	12-20	9.0-15	4.5-6.5	0	0.0-0.5	0
	35-80	---	5.0-9.0	4.5-5.5	0	0.0-0.5	0-3
15D2:							
Parke, eroded--------	0-6	10-20	7.0-15	5.1-7.3	0	1.0-3.0	0
	6-35	12-20	9.0-15	4.5-6.5	0	0.0-0.5	0
	35-80	---	5.0-9.0	4.5-5.5	0	0.0-0.5	0-3
19F:							
Sylvan---------------	0-5	13-20	---	5.6-7.3	0	1.0-3.0	0
	5-10	9.0-17	---	5.6-7.3	0	0.2-1.0	0
	10-27	15-22	---	5.6-7.3	0	0.2-0.5	0
	27-80	11-17	---	6.6-8.4	0-25	0.2-0.5	0
53B:							
Bloomfield-----------	0-5	2.0-10	1.0-8.0	5.1-7.3	0	1.0-3.0	0
	5-38	1.0-7.0	0.8-5.0	5.1-7.3	0	0.0-1.0	0
	38-60	3.0-8.0	2.0-6.0	5.1-7.8	0	0.0-1.0	0
53C:							
Bloomfield-----------	0-8	2.0-10	1.5-8.0	5.1-7.3	0	1.0-3.0	0
	8-34	1.0-7.0	0.8-5.0	5.1-7.3	0	0.0-1.0	0
	34-60	3.0-8.0	2.0-6.0	5.1-7.8	0	0.0-1.0	0
53D:							
Bloomfield-----------	0-8	2.0-10	1.5-8.0	5.1-7.3	0	1.0-3.0	0
	8-34	1.0-7.0	0.8-5.0	5.1-7.3	0	0.0-1.0	0
	34-60	3.0-8.0	2.0-6.0	5.1-7.8	0	0.0-1.0	0

Table 21.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Organic matter	Sodium adsorp-tion ratio
	In	meq/100 g	meq/100 g	pH	Pct	Pct	
75B:							
Drury	0-6	8.0-16	---	5.6-7.8	0	1.0-2.0	0
	6-33	11-15	---	5.6-7.3	0	0.0-0.2	0
	33-80	9.0-12	---	6.1-7.8	0-10	0.0-0.2	0
87A:							
Dickinson	0-8	15-20	---	5.6-7.3	0	1.0-2.0	0
	8-20	7.0-17	---	5.6-7.3	0	0.5-1.5	0
	20-31	9.0-17	7.0-13	5.1-6.5	0	0.5-1.0	0
	31-36	0.0-10	0.0-8.0	5.1-8.4	0	0.0-0.5	0
	36-60	0.0-10	---	5.6-8.4	0	0.0-0.5	0
87B:							
Dickinson	0-8	15-20	---	5.6-7.3	0	1.0-2.0	0
	8-20	7.0-17	---	5.6-7.3	0	0.5-1.5	0
	20-31	9.0-17	7.0-13	5.1-6.5	0	0.5-1.0	0
	31-36	0.0-10	0.0-8.0	5.1-6.5	0	0.0-0.5	0
	36-60	0.0-10	---	5.6-6.5	0	0.0-0.5	0
109A:							
Racoon	0-6	10-20	8.0-15	4.5-7.3	0	1.0-2.5	0
	6-30	11-17	8.0-14	4.5-7.3	0	0.2-0.8	0
	30-59	---	15-22	4.5-5.5	0	0.1-0.5	0
	59-80	11-17	8.0-14	4.5-7.3	0	0.0-0.2	0
131A:							
Alvin	0-10	7.0-11	5.0-8.0	4.5-7.3	0	0.5-1.0	0
	10-16	6.0-10	5.0-7.0	4.5-7.3	0	0.0-0.5	0
	16-42	9.0-14	6.0-10	4.5-7.3	0	0.0-0.5	0
	42-80	2.0-5.0	1.0-4.0	4.5-8.4	0-5	0.0-0.3	0
131B:							
Alvin	0-10	7.0-11	5.0-8.0	4.5-7.3	0	0.5-1.0	0
	10-16	6.0-10	5.0-7.0	4.5-7.3	0	0.0-0.5	0
	16-42	9.0-14	6.0-10	4.5-7.3	0	0.0-0.5	0
	42-80	2.0-5.0	1.0-4.0	4.5-8.4	0-5	0.0-0.3	0
131C:							
Alvin	0-10	7.0-11	5.0-8.0	4.5-7.3	0	0.5-1.0	0
	10-16	6.0-10	5.0-7.0	4.5-7.3	0	0.0-0.5	0
	16-42	9.0-14	6.0-10	4.5-7.3	0	0.0-0.5	0
	42-80	2.0-5.0	1.0-4.0	4.5-8.4	0-5	0.0-0.3	0
131F:							
Alvin	0-10	7.0-11	5.0-8.0	4.5-7.3	0	0.5-1.0	0
	10-16	6.0-10	5.0-7.0	4.5-7.3	0	0.0-0.5	0
	16-42	9.0-14	6.0-10	4.5-7.3	0	0.0-0.5	0
	42-80	2.0-5.0	1.0-4.0	4.5-8.4	0-5	0.0-0.3	0
142A:							
Patton	0-15	23-30	---	6.6-7.3	0	3.0-6.5	0
	15-35	22-29	---	6.1-7.8	0-5	1.0-3.0	0
	35-60	14-28	---	6.6-8.4	1-15	0.0-1.0	0
142A+:							
Patton, overwash	0-15	19-26	---	6.6-7.3	0	3.0-6.5	0
	15-35	22-29	---	6.1-7.8	0-5	1.0-3.0	0
	35-60	14-27	---	6.6-8.4	1-15	0.0-1.0	0

Table 21.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Organic matter	Sodium adsorp-tion ratio
	In	meq/100 g	meq/100 g	pH	Pct	Pct	
164A:							
Stoy	0-13	14-20	10-15	4.5-7.3	0	1.0-2.0	0-1
	13-32	---	16-21	4.5-5.5	0	0.2-1.0	0-1
	32-45	---	16-21	4.5-5.5	0	0.2-0.5	0-2
	45-80	12-17	9.0-13	4.5-6.0	0	0.2-0.5	0-2
164B:							
Stoy	0-13	14-20	10-15	4.5-7.3	0	1.0-2.0	0-1
	13-32	---	16-21	4.5-5.5	0	0.2-1.0	0-1
	32-45	---	16-21	4.5-5.5	0	0.2-0.5	0-2
	45-80	12-17	9.0-13	4.5-6.0	0	0.2-0.5	0-2
165A:							
Weir	0-8	10-20	8.0-15	4.5-7.3	0	1.0-2.5	0
	8-17	7.0-13	5.0-10	4.5-7.3	0	0.1-0.5	0
	17-39	---	16-20	4.5-5.5	0	0.0-0.2	0
	39-80	12-17	9.0-13	4.5-6.5	0	0.0-0.1	0
173A:							
McGary	0-11	8.0-20	---	5.6-7.3	0	1.0-3.0	0
	11-42	12-24	10-20	4.5-7.8	0-5	0.0-1.0	0
	42-50	16-24	---	6.6-8.4	0-20	0.0-0.5	0
	50-60	10-18	---	7.4-8.4	5-20	0.0-0.5	0
173B2:							
McGary, eroded	0-8	8.0-20	---	5.6-7.3	0	1.0-3.0	0
	8-42	12-24	10-20	4.5-7.8	0-5	0.0-1.0	0
	42-50	16-24	---	6.6-8.4	0-20	0.0-0.5	0
	50-60	10-18	---	7.4-8.4	5-20	0.0-0.5	0
176A:							
Marissa	0-18	19-26	---	6.1-7.3	0	3.0-4.0	0
	18-43	16-25	---	6.1-7.3	0	0.5-2.0	0
	43-60	13-22	---	7.4-8.4	0-15	0.0-0.5	0
178A:							
Ruark	0-8	5.4-8.0	4.0-6.0	4.5-7.3	0	0.5-1.0	0
	8-19	5.3-8.0	4.0-6.0	4.5-7.3	0	0.2-0.5	0
	19-49	11-17	8.0-12	4.5-6.0	0	0.1-0.5	0
	49-65	3.1-13	---	5.6-7.8	0	0.0-0.3	0
184A:							
Roby	0-9	4.0-11	3.0-8.0	4.5-7.3	0	0.5-1.0	0
	9-15	4.0-10	3.0-7.0	4.5-7.3	0	0.2-0.5	0
	15-19	12-15	8.0-11	4.5-6.5	0	0.1-0.5	0
	19-60	3.0-9.0	---	5.6-7.8	0-10	0.0-0.3	0
208A:							
Sexton	0-8	13-19	10-14	5.1-7.3	0	1.0-2.5	0
	8-12	12-18	9.0-13	4.5-7.3	0	0.3-0.8	0
	12-36	23-29	17-22	4.5-6.0	0	0.2-0.5	0
	36-45	18-26	13-20	5.1-7.3	0	0.2-0.5	0
	45-78	4.0-10	2.8-7.4	5.1-7.3	0	0.1-0.3	0
	78-80	12-21	9.0-15	5.1-7.8	0-10	0.1-0.3	0
214B:							
Hosmer	0-7	12-20	6.0-15	4.5-7.3	0	1.0-2.0	0-1
	7-28	---	8.0-15	4.5-5.5	0	0.2-1.0	0-1
	28-67	9.0-21	6.0-14	4.5-6.0	0	0.0-0.2	0-2
	67-80	9.0-16	6.0-11	4.5-6.5	0	0.0-0.2	0-2

Table 21.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Organic matter	Sodium adsorp-tion ratio
	In	meq/100 g	meq/100 g	pH	Pct	Pct	
214B2:							
Hosmer, eroded-------	0-4	9.0-20	6.0-14	4.5-6.7	0	1.0-2.0	0-1
	4-25	---	8.0-15	4.5-5.5	0	0.2-1.0	0-1
	25-64	9.0-21	6.0-14	4.5-6.0	0	0.0-0.2	0-2
	64-80	9.0-16	6.0-11	4.5-6.5	0	0.0-0.2	0-2
214C2:							
Hosmer, eroded-------	0-4	9.0-20	6.0-14	4.5-7.3	0	1.0-2.0	0-1
	4-25	---	8.0-15	4.5-5.5	0	0.2-1.0	0-1
	25-64	9.0-21	6.0-14	4.5-6.0	0	0.0-0.2	0-2
	64-80	9.0-16	6.0-11	4.5-6.5	0	0.0-0.2	0-2
214C3:							
Hosmer, severely eroded--------------	0-2	9.0-20	6.0-14	4.5-7.3	0	0.5-1.0	0-1
	2-23	---	8.0-15	4.5-5.5	0	0.2-1.0	0-1
	23-62	9.0-21	6.0-14	4.5-6.0	0	0.0-0.2	0-2
	62-80	9.0-16	6.0-11	4.5-6.5	0	0.0-0.2	0-2
231A:							
Evansville-----------	0-9	13-19	---	6.1-7.3	0	1.0-3.0	0
	9-44	14-20	---	6.1-7.8	0	0.5-1.0	0
	44-66	13-19	---	6.6-8.4	0-20	0.0-0.5	0
301B:							
Grantsburg-----------	0-11	9.0-20	7.0-15	4.1-6.5	0	1.0-3.0	0
	11-24	---	10-18	4.1-5.5	0	0.1-0.5	0-1
	24-38	---	11-20	4.1-5.5	0	0.0-0.2	0-2
	38-61	---	10-18	4.1-5.5	0	0.0-0.2	0-2
	61-80	10-20	7.0-15	4.1-6.0	0	0.0-0.2	0-4
308B:							
Alford---------------	0-10	8.0-20	6.0-15	4.5-7.3	0	0.5-2.0	0
	10-44	12-26	9.0-18	4.5-5.5	0	0.0-0.5	0
	44-80	4.0-12	3.0-9.0	5.1-6.5	0	0.0-0.2	0
308B2:							
Alford, eroded-------	0-7	8.0-20	6.0-15	4.5-7.3	0	0.5-2.0	0
	7-35	12-26	9.0-18	4.5-5.5	0	0.0-0.5	0
	35-80	4.0-12	3.0-9.0	5.1-6.5	0	0.0-0.2	0
308C2:							
Alford, eroded-------	0-6	8.0-20	6.0-15	4.5-7.3	0	0.5-2.0	0
	6-44	12-26	9.0-18	4.5-5.5	0	0.0-0.5	0
	44-80	4.0-12	3.0-9.0	5.1-6.5	0	0.0-0.2	0
308C3:							
Alford, severely eroded--------------	0-5	8.0-20	6.0-15	4.5-7.3	0	0.5-1.0	0
	5-44	12-26	9.0-18	4.5-5.5	0	0.0-0.5	0
	44-80	4.0-12	3.0-9.0	5.1-6.5	0	0.0-0.2	0
308D2:							
Alford, eroded-------	0-6	8.0-20	6.0-15	4.5-7.3	0	0.5-2.0	0
	6-44	12-26	9.0-18	4.5-5.5	0	0.0-0.5	0
	44-80	4.0-12	3.0-9.0	5.1-6.5	0	0.0-0.2	0
308D3:							
Alford, severely eroded--------------	0-5	8.0-20	6.0-15	4.5-7.3	0	0.5-1.0	0
	5-44	12-26	9.0-18	4.5-5.5	0	0.0-0.5	0
	44-80	4.0-12	3.0-9.0	5.1-6.5	0	0.0-0.2	0

Table 21.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Organic matter	Sodium adsorp-tion ratio
	In	meq/100 g	meq/100 g	pH	Pct	Pct	
337A:							
Creal----------------	0-9	14-22	10-17	5.1-7.3	0	1.0-3.0	0
	9-27	11-16	8.3-12	4.1-6.5	0	0.0-0.5	0
	27-55	15-22	11-16	4.5-6.5	0	0.0-0.2	0
	55-80	12-17	9.0-13	4.5-7.3	0	0.0-0.2	0
339F:							
Wellston-------------	0-8	8.0-16	6.0-12	5.1-6.5	0	1.0-3.0	0
	8-31	11-20	8.0-15	4.5-6.0	0	0.5-1.0	0
	31-43	11-15	8.0-11	4.5-6.0	0	0.0-0.5	0
	43-60	11-15	8.0-11	4.5-6.0	0	0.0-0.1	0
	60-70	---	---	---	---	---	---
340C2:							
Zanesville, eroded---	0-4	9.0-18	7.0-14	4.5-7.3	0	1.0-2.0	0
	4-19	11-21	8.0-16	4.5-6.0	0	0.5-2.0	0-1
	19-39	10-20	7.0-15	4.5-6.0	0	0.0-0.5	0-2
	39-57	10-20	7.0-14	4.5-6.0	0	0.0-0.5	0-4
	57-67	---	---	---	---	---	---
340C3:							
Zanesville, severely eroded--------------	0-2	9.0-18	7.0-14	4.5-6.0	0	0.5-1.0	0
	2-19	11-21	8.0-16	4.5-6.0	0	0.0-0.5	0-1
	19-37	11-20	8.0-15	4.5-6.0	0	0.0-0.5	0-2
	37-55	10-20	7.0-14	4.5-6.0	0	0.0-0.5	0-4
	55-65	---	---	---	---	---	---
340D2:							
Zanesville, eroded---	0-4	9.0-18	7.0-14	4.5-7.3	0	1.0-2.0	0
	4-19	11-21	8.0-16	4.5-6.0	0	0.5-2.0	0-1
	19-39	10-20	8.0-15	4.5-6.0	0	0.0-0.5	0-2
	39-57	10-20	7.0-14	4.5-6.0	0	0.0-0.5	0-4
	57-67	---	---	---	---	---	---
340D3:							
Zanesville, severely eroded--------------	0-2	9.0-18	7.0-14	4.5-6.0	0	0.5-1.0	0
	2-19	11-21	8.0-16	4.5-6.0	0	0.0-0.5	0-1
	19-37	11-20	8.0-15	4.5-6.0	0	0.0-0.5	0-2
	37-55	10-20	7.0-14	4.5-6.0	0	0.0-0.5	0-4
	55-65	---	---	---	---	---	---
434A:							
Ridgway--------------	0-10	10-20	8.0-15	5.1-7.3	0	1.0-3.0	0
	10-30	17-26	12-20	4.5-7.3	0	0.5-1.5	0
	30-39	8.0-25	6.0-18	4.5-6.5	0	0.0-0.5	0
	39-80	2.0-12	1.5-9.0	4.5-8.4	0	0.0-0.3	0
434B:							
Ridgway--------------	0-10	10-20	8.0-14	5.1-7.3	0	1.0-3.0	0
	10-30	17-26	12-19	4.5-7.3	0	0.5-1.5	0
	30-39	8.0-25	6.0-18	4.5-6.5	0	0.0-0.5	0
	39-80	2.0-12	1.5-9.0	5.1-7.3	0	0.0-0.3	0
434C2:							
Ridgway, eroded------	0-8	10-20	8.0-15	5.1-7.3	0	1.0-3.0	0
	8-30	17-26	12-19	4.5-7.3	0	0.5-1.5	0
	30-39	8.0-25	6.0-18	4.5-6.5	0	0.0-0.5	0
	39-80	2.0-12	1.5-9.0	4.5-8.4	0	0.0-0.3	0

Table 21.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Organic matter	Sodium adsorp-tion ratio
	In	meq/100 g	meq/100 g	pH	Pct	Pct	
436A:							
Meadowbank-----------	0-19	14-26	10-19	5.1-7.3	0	3.0-5.0	0
	19-36	22-29	16-22	5.1-7.3	0	0.0-2.0	0
	36-49	12-20	8.0-14	4.5-7.3	0	0.0-0.5	0
	49-80	2.0-8.0	1.5-6.0	5.1-7.3	0	0.0-0.5	0
436B:							
Meadowbank-----------	0-19	14-26	10-19	5.1-7.3	0	3.0-5.0	0
	19-36	22-29	16-22	5.1-7.3	0	0.0-2.0	0
	36-49	12-20	8.0-14	4.5-7.3	0	0.0-0.5	0
	49-80	2.0-8.0	1.5-6.0	5.1-7.3	0	0.0-0.5	0
445A:							
Newhaven-------------	0-15	12-24	---	6.1-7.3	0	3.0-4.0	0
	15-39	17-29	12-20	4.5-7.3	0	0.5-1.5	0
	39-80	5.0-11	---	5.6-7.3	0	0.1-0.5	0
446A:							
Springerton----------	0-19	18-28	---	6.1-7.3	0	4.0-6.0	0
	19-45	9.0-17	7.0-13	5.1-7.3	0	0.0-1.0	0
	45-65	8.0-16	---	5.6-7.3	0	0.0-0.5	0
453B:							
Muren----------------	0-9	10-20	7.0-15	5.1-7.3	0	0.5-2.0	0
	9-14	8.0-15	6.0-11	5.1-6.5	0	0.2-1.0	0
	14-51	15-25	11-19	4.5-6.0	0	0.0-0.5	0
	51-80	5.0-15	4.0-11	4.5-7.3	0	0.0-0.2	0
467B2:							
Markland, eroded-----	0-6	15-25	11-20	5.1-7.3	0	1.0-3.0	0
	6-25	19-29	14-22	4.5-7.8	0-5	0.5-1.0	0
	25-42	16-26	---	7.4-8.4	5-20	0.5-1.0	0
	42-80	13-23	---	7.4-8.4	5-20	0.5-1.0	0
467C2:							
Markland, eroded-----	0-6	15-25	11-20	5.1-7.3	0	1.0-3.0	0
	6-25	19-29	14-22	4.5-7.8	0-5	0.5-1.0	0
	25-42	16-26	---	7.4-8.4	5-20	0.5-1.0	0
	42-80	13-23	---	7.4-8.4	5-20	0.5-1.0	0
467C3:							
Markland, severely eroded--------------	0-4	15-25	11-20	5.1-7.3	0	0.5-2.0	0
	4-20	19-29	14-22	4.5-7.8	0-5	0.5-1.0	0
	20-42	16-26	---	7.4-8.4	5-20	0.5-1.0	0
	42-80	13-23	---	7.4-8.4	5-20	0.5-1.0	0
482B:							
Uniontown------------	0-9	8.0-15	6.0-11	5.1-7.3	0	1.0-3.0	0
	9-34	8.0-23	6.0-17	5.1-6.5	0	0.0-0.5	0
	34-65	8.0-23	---	6.6-8.4	0-5	0.0-0.5	0
482B2:							
Uniontown, eroded----	0-8	8.0-15	6.0-11	5.1-7.3	0	0.5-2.0	0
	8-34	8.0-23	6.0-17	5.1-7.8	0	0.0-0.5	0
	34-65	8.0-23	---	6.6-8.4	0-5	0.0-0.5	0
482C2:							
Uniontown, eroded----	0-8	8.0-15	6.0-11	5.1-7.3	0	0.5-2.0	0
	8-34	8.0-23	6.0-17	5.1-7.8	0	0.0-0.5	0
	34-65	8.0-23	---	6.6-8.4	0-5	0.0-0.5	0

Table 21.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Organic matter	Sodium adsorp-tion ratio
	In	meq/100 g	meq/100 g	pH	Pct	Pct	
482C3:							
Uniontown, severely eroded--------------	0-7	8.0-15	6.0-11	5.1-7.3	0	0.5-1.5	0
	7-34	8.0-23	6.0-17	5.1-6.5	0	0.0-0.5	0
	34-60	8.0-23	---	6.6-8.4	0-5	0.0-0.5	0
483A:							
Henshaw--------------	0-12	6.0-14	4.0-11	5.1-7.3	0	0.5-2.0	0
	12-33	10-18	7.0-13	5.1-6.5	0	0.0-0.5	0
	33-80	10-15	---	5.6-8.4	0-10	0.0-0.5	0
484A:							
Harco----------------	0-17	18-26	---	6.1-7.3	0	3.0-5.0	0
	17-39	15-23	---	6.1-7.3	0	0.5-1.0	0
	39-61	13-18	---	7.4-8.4	0-15	0.5-1.0	0
585F:							
Negley---------------	0-7	8.0-22	5.0-12	4.5-7.3	0	1.0-3.0	0
	7-34	10-20	8.0-15	4.5-6.5	0	0.0-0.5	0
	34-80	10-20	8.0-15	4.5-6.0	0	0.0-0.5	0-5
630C3:							
Navlys, severely eroded--------------	0-7	22-25	---	5.6-7.3	0	0.8-2.0	0
	7-22	21-28	---	5.6-7.3	0	0.2-1.0	0
	22-31	13-21	---	5.6-7.8	0-25	0.0-0.5	0
	31-80	7.6-14	---	7.4-8.4	15-35	0.0-0.3	0
630D3:							
Navlys, severely eroded--------------	0-7	22-25	---	5.6-7.3	0	0.8-2.0	0
	7-22	21-27	---	5.6-7.3	0	0.2-1.0	0
	22-31	13-21	---	5.6-7.8	0-25	0.0-0.5	0
	31-80	7.6-14	---	7.4-8.4	15-35	0.0-0.3	0
750A:							
Skelton--------------	0-10	8.0-14	6.0-12	5.1-7.3	0	1.0-2.0	0
	10-37	---	8.0-12	4.5-5.5	0	0.5-1.0	0
	37-80	5.0-18	3.0-16	4.5-6.0	0	0.0-0.5	0
750B:							
Skelton--------------	0-10	8.0-14	6.0-12	5.1-7.3	0	1.0-2.0	0
	10-37	---	8.0-12	4.5-5.5	0	0.5-1.0	0
	37-80	5.0-18	3.0-16	4.5-6.0	0	0.0-0.5	0
750C2:							
Skelton, eroded------	0-6	8.0-14	6.0-12	5.1-7.3	0	1.0-2.0	0
	6-37	---	8.0-12	4.5-5.5	0	0.5-1.0	0
	37-80	5.0-18	3.0-16	4.5-6.0	0	0.0-0.5	0
751A:							
Crawleyville---------	0-18	8.0-18	---	5.6-7.3	0	1.0-2.5	0
	18-60	11-18	8.0-13	4.5-7.3	0	0.0-1.0	0
784F:							
Berks----------------	0-3	5.0-18	3.0-15	3.6-6.5	0	2.0-4.0	0
	3-20	5.0-18	3.0-15	3.6-6.5	0	0.0-0.5	0
	20-30	5.0-10	3.0-7.0	3.6-6.5	0	0.0-0.5	0
	30-34	---	---	---	0	---	0

Table 21.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Organic matter	Sodium adsorp-tion ratio
	In	meq/100 g	meq/100 g	pH	Pct	Pct	
802B:							
Orthents, loamy	0-6	9.0-12	---	5.6-7.3	0	0.5-1.0	0
	6-60	9.0-20	---	5.6-7.3	0	0.1-0.5	0
865.							
Pits, gravel							
898G:							
Sylvan	0-5	13-20	---	5.6-7.3	0	1.0-3.0	0
	5-10	9.0-17	---	5.6-7.3	0	0.2-1.0	0
	10-27	15-22	---	5.6-7.3	0	0.2-0.5	0
	27-80	11-17	---	6.6-8.4	0-25	0.2-0.5	0
Hickory	0-3	10-20	8.0-15	4.5-6.0	0	1.0-3.0	0-2
	3-16	10-20	8.0-15	4.5-6.0	0	0.2-1.0	0-2
	16-43	10-19	8.0-14	4.5-7.3	0	0.1-0.5	0-2
	43-80	8.0-15	---	5.6-8.4	0-15	0.1-0.3	0-2
908G:							
Kell	0-3	10-20	8.0-17	4.5-6.0	0	1.0-3.0	0
	3-7	7.0-15	5.0-11	4.5-6.0	0	0.2-1.0	0
	7-13	13-19	10-16	4.5-6.0	0	0.2-0.5	0
	13-35	7.0-18	5.0-14	4.1-6.0	0	0.1-0.3	0
	35-60	---	---	---	---	---	---
Hickory	0-3	10-20	8.0-15	4.5-6.0	0	1.0-3.0	0-2
	3-16	10-20	8.0-15	4.5-6.0	0	0.2-1.0	0-2
	16-43	10-19	8.0-14	4.5-7.3	0	0.1-0.5	0-2
	43-80	8.0-15	---	5.6-8.4	0-10	0.1-0.3	0-2
929D3:							
Hickory, severely eroded	0-8	10-20	8.0-15	4.5-7.3	0	0.5-1.0	0-2
	8-46	10-19	8.0-14	4.5-6.0	0	0.1-0.5	0-2
	46-58	10-19	8.0-14	4.5-7.3	0	0.0-0.2	0-2
	58-80	8.0-15	---	5.6-8.4	0-10	0.0-0.2	0-2
Ava, severely eroded	0-9	15-20	11-15	4.5-7.3	0	0.5-1.5	0-1
	9-28	---	7.0-20	4.5-5.5	0	0.2-0.8	0-2
	28-64	---	5.0-16	4.5-5.5	0	0.0-0.5	0-5
	64-78	6.0-19	5.0-16	4.5-6.0	0	0.0-0.2	0-5
1288A:							
Petrolia, undrained, frequently flooded	0-8	20-25	---	5.6-7.8	0	2.0-3.0	0
	8-55	15-22	---	5.6-7.3	0	0.2-1.0	0
	55-80	10-20	7.0-14	5.1-7.8	0	0.2-1.0	0
3092A:							
Sarpy, frequently flooded	0-8	2.0-8.0	---	6.6-7.8	0-5	0.5-1.0	0
	8-60	2.0-8.0	---	6.6-7.8	0-10	0.0-0.5	0
3103L:							
Houghton, frequently flooded	0-60	140-180	---	5.6-7.8	0	70-100	0

Table 21.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Organic matter	Sodium adsorp-tion ratio
	In	meq/100 g	meq/100 g	pH	Pct	Pct	
3108A:							
Bonnie, frequently flooded	0-10	13-20	10-15	4.5-7.3	0	1.0-3.0	0
	10-27	---	8.0-13	4.5-5.5	0	0.0-1.0	0
	27-80	11-16	8.0-13	4.5-7.8	0	0.0-1.0	0
3142A:							
Patton, frequently flooded	0-15	23-30	---	6.6-7.3	0	3.0-6.5	0
	15-35	22-29	---	6.1-7.8	0-5	1.0-3.0	0
	35-60	14-28	---	6.6-8.4	1-15	0.0-1.0	0
3178A:							
Ruark, frequently flooded	0-8	5.4-8.0	4.0-6.0	4.5-7.3	0	0.5-1.0	0
	8-19	5.3-8.0	4.0-6.0	4.5-7.3	0	0.2-0.5	0
	19-49	11-17	8.0-12	4.5-6.0	0	0.1-0.5	0
	49-65	3.1-13	---	5.6-7.8	0	0.0-0.3	0
3231A:							
Evansville, frequently flooded	0-9	13-19	---	6.1-7.3	0	1.0-3.0	0
	9-44	14-20	---	6.1-7.8	0	0.5-1.0	0
	44-66	13-19	---	6.6-8.4	0-20	0.0-0.5	0
3302A:							
Ambraw, frequently flooded	0-14	20-27	---	5.6-7.3	0	2.0-4.0	0
	14-37	12-25	---	5.1-7.3	0	0.0-1.0	0
	37-60	6.0-20	---	6.1-8.4	0-5	0.0-1.0	0
3304A:							
Landes, frequently flooded	0-19	6.0-16	---	5.6-7.3	0	1.0-2.0	0
	19-37	3.0-13	---	5.6-7.8	0-5	0.0-2.0	0
	37-60	3.0-13	---	5.6-8.4	0-10	0.0-2.0	0
3331A:							
Haymond, frequently flooded	0-20	7.0-20	---	5.6-7.8	0	1.0-3.0	0
	20-60	5.0-12	---	5.6-7.8	0	0.5-2.0	0
	60-80	3.0-16	---	5.6-7.8	0	0.0-1.0	0
3333A:							
Wakeland, frequently flooded	0-8	7.0-20	---	5.6-7.3	0	1.0-3.0	0
	8-68	5.0-15	---	5.6-7.8	0	0.0-1.0	0
	68-80	5.0-15	---	5.6-7.8	0	0.0-0.5	0
3382A:							
Belknap, frequently flooded	0-7	7.0-17	5.0-13	4.5-7.3	0	1.0-3.0	0
	7-59	---	4.0-14	4.5-5.5	0	0.0-2.0	0
	59-80	5.0-20	2.0-15	4.5-7.3	0	0.0-1.0	0
3420A:							
Piopolis, frequently flooded	0-7	20-25	15-19	5.1-7.3	0	1.0-3.0	0
	7-37	---	11-16	4.5-5.5	0	0.1-2.0	0
	37-80	10-20	8.0-16	5.1-7.3	0	0.1-2.0	0

Table 21.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Organic matter	Sodium adsorp-tion ratio
	In	meq/100 g	meq/100 g	pH	Pct	Pct	
3465A:							
Montgomery, frequently flooded	0-15	28-34	---	6.1-7.8	0	3.0-6.0	0
	15-38	20-31	---	6.1-7.8	0-10	1.0-2.0	0
	38-60	14-22	---	7.4-8.4	10-20	0.5-1.0	0
3524A:							
Zipp, frequently flooded	0-10	17-30	---	5.6-7.3	0	1.0-3.0	0
	10-45	19-32	---	5.6-7.3	0	0.5-1.8	0
	45-60	16-32	---	6.6-8.4	0-20	0.0-1.0	0
3597A:							
Armiesburg, frequently flooded	0-15	14-29	---	6.1-7.8	0	2.0-4.0	0
	15-67	15-23	---	6.1-7.8	0-5	0.5-1.0	0
	67-80	10-23	---	6.1-7.8	0-10	0.2-1.0	0
3601A:							
Nolin, frequently flooded	0-9	9.0-21	---	5.6-7.3	0	1.0-3.0	0
	9-51	10-17	---	5.6-7.3	0	0.5-2.0	0
	51-60	5.0-16	---	5.6-7.8	0-10	0.2-1.0	0
3602A:							
Newark, frequently flooded	0-9	12-25	---	5.6-7.8	0	2.0-4.0	0
	9-32	12-20	---	5.6-7.8	0	0.5-2.0	0
	32-60	10-20	---	5.6-7.8	0	0.2-1.0	0
3665A:							
Stonelick, frequently flooded	0-9	10-25	---	7.4-8.4	2-15	1.0-3.0	0
	9-60	5.0-12	---	7.4-8.4	2-20	0.5-1.0	0
7087A:							
Dickinson, rarely flooded	0-8	15-20	---	5.6-7.3	0	1.0-2.0	0
	8-20	7.0-17	---	5.6-7.3	0	0.5-1.5	0
	20-31	9.0-17	7.0-13	5.1-6.5	0	0.5-1.0	0
	31-36	0.0-10	0.0-8.0	5.1-6.5	0	0.0-0.5	0
	36-60	0.0-10	---	5.6-6.5	0	0.0-0.5	0
7109A:							
Racoon, rarely flooded	0-6	13-20	10-15	4.5-7.3	0	1.0-2.5	0
	6-30	11-17	8.0-13	4.5-7.3	0	0.2-0.8	0
	30-59	---	17-25	4.5-5.5	0	0.1-0.5	0
	59-80	16-31	12-23	4.5-6.5	0	0.0-0.2	0
7131A:							
Alvin, rarely flooded	0-10	7.0-11	5.0-8.0	4.5-7.3	0	0.5-1.0	0
	10-16	6.0-10	5.0-7.0	4.5-7.3	0	0.0-0.5	0
	16-42	9.0-14	6.0-10	4.5-7.3	0	0.0-0.5	0
	42-80	2.0-5.0	1.0-4.0	4.5-8.4	0-5	0.0-0.3	0
7131B:							
Alvin, rarely flooded	0-10	7.0-11	5.0-8.0	4.5-7.3	0	0.5-1.0	0
	10-16	6.0-10	5.0-7.0	4.5-7.3	0	0.0-0.5	0
	16-42	9.0-14	6.0-10	4.5-7.3	0	0.0-0.5	0
	42-80	2.0-5.0	1.0-4.0	4.5-8.4	0-5	0.0-0.3	0

Table 21.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Organic matter	Sodium adsorp-tion ratio
	In	meq/100 g	meq/100 g	pH	Pct	Pct	
7142A:							
Patton, rarely flooded-------------	0-15	23-30	---	6.6-7.3	0	3.0-6.5	0
	15-35	22-29	---	6.1-7.8	0-5	1.0-3.0	0
	35-60	14-28	---	6.6-8.4	1-15	0.0-1.0	0
7142A+:							
Patton, rarely flooded, overwash---	0-15	19-26	---	6.6-7.3	0	3.0-6.5	0
	15-35	22-29	---	6.1-7.8	0-5	1.0-3.0	0
	35-60	14-27	---	6.6-8.4	1-15	0.0-1.0	0
7173A:							
McGary, rarely flooded-------------	0-11	8.0-20	---	5.6-7.3	0	1.0-3.0	0
	11-42	12-24	10-20	4.5-7.8	0-5	0.0-1.0	0
	42-50	16-24	---	6.6-8.4	0-20	0.0-0.5	0
	50-60	10-18	---	7.4-8.4	5-20	0.0-0.5	0
7173B2:							
McGary, rarely flooded-------------	0-8	8.0-20	---	5.6-7.3	0	1.0-3.0	0
	8-42	12-24	10-20	4.5-7.8	0-5	0.0-1.0	0
	42-50	16-24	---	6.6-8.4	0-20	0.0-0.5	0
	50-60	10-18	---	7.4-8.4	5-20	0.0-0.5	0
7176A:							
Marissa, rarely flooded-------------	0-18	19-26	---	6.1-7.3	0	3.0-4.0	0
	18-43	16-25	---	6.1-7.3	0	0.5-2.0	0
	43-60	13-22	---	7.4-8.4	0-15	0.0-0.5	0
7178A:							
Ruark, rarely flooded	0-8	5.4-8.0	4.0-6.0	4.5-7.3	0	0.5-1.0	0
	8-19	5.3-8.0	4.0-6.0	4.5-7.3	0	0.2-0.5	0
	19-49	11-17	8.0-12	4.5-6.0	0	0.1-0.5	0
	49-65	3.1-13	---	5.6-7.8	0	0.0-0.3	0
7184A:							
Roby, rarely flooded	0-9	4.0-11	3.0-8.0	4.5-7.3	0	0.5-1.0	0
	9-15	4.0-10	3.0-7.0	4.5-7.3	0	0.2-0.5	0
	15-23	12-15	8.0-11	4.5-6.5	0	0.1-0.5	0
	23-60	3.0-9.0	---	5.6-7.8	0-10	0.0-0.3	0
7208A:							
Sexton, rarely flooded-------------	0-8	13-19	10-14	5.1-7.3	0	1.0-2.5	0
	8-12	12-18	9.0-13	4.5-7.3	0	0.3-0.8	0
	12-36	23-29	17-22	4.5-6.0	0	0.2-0.5	0
	36-45	18-26	13-20	5.1-7.3	0	0.2-0.5	0
	45-78	4.0-10	2.8-7.4	5.1-7.3	0	0.1-0.3	0
	78-80	12-21	9.0-15	5.1-7.8	0-10	0.1-0.3	0
7434A:							
Ridgway, rarely flooded-------------	0-10	10-20	8.0-15	5.1-7.3	0	1.0-3.0	0
	10-30	17-26	12-19	4.5-7.3	0	0.5-1.5	0
	30-39	8.0-25	6.0-18	4.5-6.5	0	0.0-0.5	0
	39-80	2.0-12	1.5-9.0	4.5-8.4	0	0.0-0.3	0

Table 21.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Organic matter	Sodium adsorp-tion ratio
	In	meq/100 g	meq/100 g	pH	Pct	Pct	
7434B:							
Ridgway, rarely flooded	0-10	10-20	8.0-15	5.1-7.3	0	1.0-3.0	0
	10-30	17-26	12-19	4.5-7.3	0	0.5-1.5	0
	30-39	8.0-25	6.0-18	4.5-6.5	0	0.0-0.5	0
	39-80	2.0-12	1.5-9.0	5.1-7.3	0	0.0-0.3	0
7436A:							
Meadowbank, rarely flooded	0-19	14-26	10-19	5.1-7.3	0	3.0-5.0	0
	19-36	22-29	16-22	5.1-7.3	0	0.0-2.0	0
	36-49	12-20	8.0-14	4.5-7.3	0	0.0-0.5	0
	49-80	2.0-8.0	1.5-6.0	5.1-7.3	0	0.0-0.5	0
7445A:							
Newhaven, rarely flooded	0-15	12-24	---	6.1-7.3	0	3.0-4.0	0
	15-40	17-29	12-20	4.5-7.3	0	0.5-1.5	0
	40-80	5.0-15	---	5.6-7.3	0	0.1-0.5	0
7446A:							
Springerton, rarely flooded	0-19	18-28	---	6.1-7.3	0	4.0-6.0	0
	19-45	9.0-17	7.0-13	5.1-7.3	0	0.0-1.0	0
	45-65	8.0-16	---	5.6-7.3	0	0.0-0.5	0
7462A:							
Sciotoville, rarely flooded	0-8	10-15	7.0-11	5.1-6.5	0	1.0-3.0	0
	8-24	---	9.0-14	4.5-5.5	0	0.0-0.5	0
	24-52	12-19	9.0-14	4.5-6.0	0	0.0-0.5	0
	52-80	9.0-19	6.0-16	5.1-6.5	0	0.0-0.5	0
7462B:							
Sciotoville, rarely flooded	0-8	10-15	7.0-11	5.1-6.5	0	1.0-3.0	0
	8-24	---	9.0-14	4.5-5.5	0	0.0-0.5	0
	24-52	12-19	9.0-14	4.5-6.0	0	0.0-0.5	0
	52-80	9.0-19	6.0-16	5.1-6.5	0	0.0-0.5	0
7465A:							
Montgomery, rarely flooded	0-15	28-34	---	6.1-7.8	0	3.0-6.0	0
	15-38	20-31	---	6.1-7.8	0-10	1.0-2.0	0
	38-60	14-22	---	7.4-8.4	10-20	0.5-1.0	0
7467B2:							
Markland, rarely flooded	0-6	15-25	11-20	5.1-7.3	0	1.0-3.0	0
	6-25	19-29	14-22	4.5-7.8	0-5	0.5-1.0	0
	25-42	16-26	---	7.4-8.4	5-20	0.5-1.0	0
	42-80	13-23	---	7.4-8.4	10-20	0.5-1.0	0
7467C2:							
Markland, rarely flooded	0-6	15-25	11-20	5.1-7.3	0	1.0-3.0	0
	6-25	19-29	14-22	4.5-7.8	0-5	0.5-1.0	0
	25-42	16-26	---	7.4-8.4	5-20	0.5-1.0	0
	42-80	13-23	---	7.4-8.4	10-20	0.5-1.0	0

Table 21.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Organic matter	Sodium adsorp-tion ratio
	In	meq/100 g	meq/100 g	pH	Pct	Pct	
7482B:							
Uniontown, rarely flooded-------------	0-9	8.0-15	6.0-11	5.1-7.3	0	1.0-3.0	0
	9-34	8.0-23	6.0-17	5.1-6.5	0	0.0-0.5	0
	34-65	8.0-23	---	6.6-8.4	0-5	0.0-0.5	0
7482C2:							
Uniontown, rarely flooded-------------	0-8	8.0-15	6.0-11	5.1-7.3	0	0.5-2.0	0
	8-34	8.0-23	6.0-17	5.1-7.8	0	0.0-0.5	0
	34-65	8.0-23	---	6.6-8.4	0-5	0.0-0.5	0
7483A:							
Henshaw, rarely flooded-------------	0-12	6.0-14	4.0-11	5.1-7.3	0	0.5-2.0	0
	12-33	10-18	7.0-13	5.1-6.5	0	0.0-0.5	0
	33-80	10-15	---	5.6-8.4	0-10	0.0-0.5	0
7484A:							
Harco, rarely flooded	0-17	18-26	---	6.1-7.3	0	3.0-5.0	0
	17-39	15-23	---	6.1-7.3	0	0.5-1.0	0
	39-61	13-18	---	7.4-8.4	0-15	0.5-1.0	0
7524A:							
Zipp, rarely flooded	0-10	17-30	---	5.6-7.3	0	1.0-3.0	0
	10-45	19-32	---	5.6-7.3	0	0.5-1.8	0
	45-60	16-32	---	6.6-8.4	0-20	0.0-1.0	0
7524A+:							
Zipp, rarely flooded, overwash---	0-17	12-21	---	6.1-7.3	0	1.0-2.5	0
	17-60	17-35	---	5.6-7.3	0	0.5-1.5	0
7750A:							
Skelton, rarely flooded-------------	0-10	8.0-14	6.0-12	5.1-7.3	0	1.0-2.0	0
	10-37	---	8.0-12	4.5-5.5	0	0.5-1.0	0
	37-80	5.0-18	3.0-16	4.5-6.0	0	0.0-0.5	0
7750B:							
Skelton, rarely flooded-------------	0-10	8.0-14	6.0-12	5.1-7.3	0	1.0-2.0	0
	10-37	---	8.0-12	4.5-5.5	0	0.5-1.0	0
	37-80	5.0-18	3.0-16	4.5-6.0	0	0.0-0.5	0
7750C2:							
Skelton, rarely flooded-------------	0-6	8.0-14	6.0-12	5.1-7.3	0	1.0-2.0	0
	6-37	---	8.0-12	4.5-5.5	0	0.5-1.0	0
	37-80	5.0-18	3.0-16	4.5-6.0	0	0.0-0.5	0
7751A:							
Crawleyville, rarely flooded-------------	0-18	8.0-18	---	5.6-7.3	0	1.0-2.5	0
	18-60	11-18	8.0-13	4.5-7.3	0	0.0-1.0	0
7787A:							
Banlic, rarely flooded-------------	0-8	7.0-13	5.0-9.0	5.1-7.8	0	1.0-2.0	0
	8-21	7.0-13	5.0-9.0	4.5-7.3	0	0.2-0.8	0
	21-55	---	4.0-9.0	4.5-5.5	0	0.1-0.5	0
	55-80	7.0-13	5.0-9.0	4.5-6.5	0	0.1-0.3	0

Table 21.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Organic matter	Sodium adsorp-tion ratio
	In	meq/100 g	meq/100 g	pH	Pct	Pct	
7812E:							
Typic Hapludalfs, rarely flooded------	0-8	18-24	13-18	5.1-7.3	0	1.0-3.0	0
	8-60	10-25	8.0-19	4.5-7.8	0-5	0.0-1.0	0
8072A:							
Sharon, occasionally flooded-------------	0-13	7.0-20	5.0-15	4.5-7.3	0	0.5-3.0	0
	13-40	---	2.0-8.0	4.5-5.5	0	0.2-0.5	0
	40-80	3.0-10	2.0-8.0	4.5-7.3	0	0.2-0.5	0
8460A:							
Ginat, occasionally flooded-------------	0-19	10-22	8.0-17	4.5-7.3	0	1.0-3.0	0
	19-34	13-21	10-16	4.5-6.0	0	0.0-0.5	0
	34-49	13-25	10-19	4.5-5.5	0	0.0-0.5	0
	49-80	13-23	10-18	4.5-7.8	0	0.0-0.5	0

Table 22.--Water Features

(See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Map symbol and soil name	Hydro-logic group	Months	Water table: Upper limit	Water table: Lower limit	Water table: Kind of water table	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft		Ft				
2A:										
Cisne	D	Jan-Jun	0.0-1.0	1.0-6.0	Perched	---	---	None	---	None
		Jul-Dec	>6.0	>6.0	---	---	---	None	---	None
3A:										
Hoyleton	C	Jan-May	1.0-3.0	>6.0	Apparent	---	---	None	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	None
3B:										
Hoyleton	C	Jan-May	1.0-3.0	>6.0	Apparent	---	---	None	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	None
8D2:										
Hickory, eroded	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
8F:										
Hickory	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
12A:										
Wynoose	D	Jan-Jun	0.0-1.0	1.0-6.0	Perched	0.0-0.5	Brief	Frequent	---	None
		Jul-Dec	>6.0	>6.0	---	---	---	---	---	None
13A:										
Bluford	C	Jan-May	0.5-2.0	2.0-3.0	Perched	---	---	None	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	None
13B:										
Bluford	C	Jan-May	0.5-2.0	2.0-3.0	Perched	---	---	None	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	None
13B2:										
Bluford, eroded	C	Jan-May	0.5-2.0	2.0-3.0	Perched	---	---	None	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	None
14B:										
Ava	C	Jan-Apr	1.5-3.5	3.5-6.0	Perched	---	---	None	---	None
		May-Dec	>6.0	>6.0	---	---	---	None	---	None
14B2:										
Ava, eroded	C	Jan-Apr	1.5-3.5	3.5-6.0	Perched	---	---	None	---	None
		May-Dec	>6.0	>6.0	---	---	---	None	---	None
14C2:										
Ava, eroded	C	Jan-Apr	1.5-3.5	3.5-6.0	Perched	---	---	None	---	None
		May-Dec	>6.0	>6.0	---	---	---	None	---	None
14C3:										
Ava, severely eroded	C	Jan-Apr	1.5-3.5	3.5-6.0	Perched	---	---	None	---	None
		May-Dec	>6.0	>6.0	---	---	---	None	---	None
15B:										
Parke	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
15C2:										
Parke, eroded	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None

Table 22.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Months	Water table: Upper limit	Water table: Lower limit	Water table: Kind of water table	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft		Ft				
15D2:										
Parke, eroded	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
19F:										
Sylvan	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
53B:										
Bloomfield	A	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
53C:										
Bloomfield	A	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
53D:										
Bloomfield	A	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
75B:										
Drury	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
87A:										
Dickinson	A	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
87B:										
Dickinson	A	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
109A:										
Racoon	C/D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Occasional	---	None
		Jul-Dec	>6.0	>6.0	---	---	---	---	---	None
131A:										
Alvin	A	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
131B:										
Alvin	A	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
131C:										
Alvin	A	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
131F:										
Alvin	A	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
142A:										
Patton	B/D	Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	---	---	None
142A+:										
Patton, overwash	B/D	Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	---	---	None
164A:										
Stoy	C	Jan-May	1.0-3.0	3.0-6.0	Perched	---	---	None	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	None
164B:										
Stoy	C	Jan-May	1.0-3.0	3.0-6.0	Perched	---	---	None	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	None
165A:										
Weir	D	Jan-Jun	0.0-1.0	1.0-6.0	Perched	0.0-0.5	Very brief	Occasional	---	None
		Jul-Dec	>6.0	>6.0	---	---	---	---	---	None

Table 22.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Months	Water table			Ponding			Flooding	
			Upper limit	Lower limit	Kind of water table	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft		Ft				
173A:										
McGary	C	Jan-May	1.0-3.0	>6.0	Apparent	---	---	None	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	None
173B2:										
McGary, eroded	C	Jan-May	1.0-3.0	>6.0	Apparent	---	---	None	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	None
176A:										
Marissa	C	Jan-May	1.0-3.0	>6.0	Apparent	---	---	None	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	None
178A:										
Ruark	C/D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	---	None
		Jul-Dec	>6.0	>6.0	---	---	---	---	---	None
184A:										
Roby	B	Jan-May	1.0-3.0	>6.0	Apparent	---	---	None	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	None
208A:										
Sexton	C/D	Jan-Jun	0.0-1.0	1.0-6.0	Perched	0.0-0.5	Brief	Frequent	---	None
		Jul-Dec	>6.0	>6.0	---	---	---	---	---	None
214B:										
Hosmer	C	Jan-Apr	1.5-3.5	3.5-6.0	Perched	---	---	None	---	None
		May-Dec	>6.0	>6.0	---	---	---	None	---	None
214B2:										
Hosmer, eroded	C	Jan-Apr	1.5-3.5	3.5-6.0	Perched	---	---	None	---	None
		May-Dec	>6.0	>6.0	---	---	---	None	---	None
214C2:										
Hosmer, eroded	C	Jan-Apr	1.5-3.5	3.5-6.0	Perched	---	---	None	---	None
		May-Dec	>6.0	>6.0	---	---	---	None	---	None
214C3:										
Hosmer, severely eroded	C	Jan-Apr	1.5-3.5	3.5-6.0	Perched	---	---	None	---	None
		May-Dec	>6.0	>6.0	---	---	---	None	---	None
231A:										
Evansville	B/D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Very brief	Frequent	---	None
		Jul-Dec	>6.0	>6.0	---	---	---	---	---	None
301B:										
Grantsburg	C	Jan-Apr	1.5-3.5	3.5-6.0	Perched	---	---	None	---	None
		May-Dec	>6.0	>6.0	---	---	---	None	---	None
308B:										
Alford	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
308B2:										
Alford, eroded	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
308C2:										
Alford, eroded	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
308C3:										
Alford, severely eroded	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None

Table 22.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Months	Water table: Upper limit	Water table: Lower limit	Water table: Kind of water table	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft		Ft				
308D2:										
Alford, eroded	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
308D3:										
Alford, severely eroded	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
337A:										
Creal	C	Jan-May	1.0-3.0	>6.0	Apparent	---	---	None	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	None
339F:										
Wellston	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
340C2:										
Zanesville, eroded	D	Jan-Apr	1.5-3.5	3.5-6.0	Perched	---	---	None	---	None
		May-Dec	>6.0	>6.0	---	---	---	None	---	None
340C3:										
Zanesville, severely eroded	D	Jan-Apr	1.5-3.5	3.5-6.0	Perched	---	---	None	---	None
		May-Dec	>6.0	>6.0	---	---	---	None	---	None
340D2:										
Zanesville, eroded	D	Jan-Apr	1.5-3.5	3.5-6.0	Perched	---	---	None	---	None
		May-Dec	>6.0	>6.0	---	---	---	None	---	None
340D3:										
Zanesville, severely eroded	D	Jan-Apr	1.5-3.5	3.5-6.0	Perched	---	---	None	---	None
		May-Dec	>6.0	>6.0	---	---	---	None	---	None
434A:										
Ridgway	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
434B:										
Ridgway	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
434C2:										
Ridgway, eroded	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
436A:										
Meadowbank	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
436B:										
Meadowbank	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
445A:										
Newhaven	C	Jan-May	1.0-3.0	>6.0	Apparent	---	---	None	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	None
446A:										
Springerton	B/D	Jan-Jun	0.0-2.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	---	None
		Jul-Dec	>6.0	>6.0	---	---	---	---	---	None
453B:										
Muren	B	Jan-Apr	1.0-2.5	>6.0	Apparent	---	---	None	---	None
		May-Dec	>6.0	>6.0	---	---	---	None	---	None
467B2:										
Markland, eroded	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None

Table 22.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Months	Water table: Upper limit	Water table: Lower limit	Water table: Kind of water table	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft		Ft				
467C2:										
Markland, eroded	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
467C3:										
Markland, severely eroded	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
482B:										
Uniontown	C	Jan-Apr	2.0-3.5	>6.0	Apparent	---	---	None	---	None
		May-Dec	>6.0	>6.0	---	---	---	None	---	None
482B2:										
Uniontown, eroded	C	Jan-Apr	2.0-3.5	>6.0	Apparent	---	---	None	---	None
		May-Dec	>6.0	>6.0	---	---	---	None	---	None
482C2:										
Uniontown, eroded	C	Jan-Apr	2.0-3.5	>6.0	Apparent	---	---	None	---	None
		May-Dec	>6.0	>6.0	---	---	---	None	---	None
482C3:										
Uniontown, severely eroded	C	Jan-Apr	2.0-3.5	>6.0	Apparent	---	---	None	---	None
		May-Dec	>6.0	>6.0	---	---	---	None	---	None
483A:										
Henshaw	C/D	Jan-May	1.0-2.0	>6.0	Apparent	---	---	None	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	None
484A:										
Harco	C	Jan-May	1.0-3.0	>6.0	Apparent	---	---	None	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	None
585F:										
Negley	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
630C3:										
Navlys, severely eroded	B	Jan-Apr	4.0-6.0	>6.0	Apparent	---	---	None	---	None
		May-Dec	>6.0	>6.0	---	---	---	None	---	None
630D3:										
Navlys, severely eroded	B	Jan-Apr	4.0-6.0	>6.0	Apparent	---	---	None	---	None
		May-Dec	>6.0	>6.0	---	---	---	None	---	None
750A:										
Skelton	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
750B:										
Skelton	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
750C2:										
Skelton, eroded	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
751A:										
Crawleyville	B	Jan-May	0.5-2.0	>6.0	Apparent	---	---	None	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	None
784F:										
Berks	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None

Table 22.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Months	Water table: Upper limit	Water table: Lower limit	Water table: Kind of water table	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft		Ft				
802B:										
Orthents, loamy	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
865.										
Pits, gravel										
898G:										
Sylvan	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Hickory	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
908G:										
Kell	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Hickory	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
929D3:										
Hickory, severely eroded	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Ava, severely eroded	C	Jan-Apr	1.5-3.5	3.5-6.0	Perched	---	---	None	---	None
		May-Dec	>6.0	>6.0	---	---	---	None	---	None
1288A:										
Petrolia, undrained, frequently flooded	C/D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-2.0	Long	Frequent	Brief	Frequent
		Jul-Dec	0.0-6.0	>6.0	Apparent	---	---	---	---	---
3092A:										
Sarpy, frequently flooded	A	Jan-Jun	>6.0	>6.0	---	---	---	None	Brief	Frequent
		Jul-Oct	>6.0	>6.0	---	---	---	None	---	---
		Nov-Dec	>6.0	>6.0	---	---	---	None	Brief	Frequent
3103L:										
Houghton, frequently flooded	A/D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-1.0	Long	Frequent	Long	Frequent
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	---
		Nov-Dec	0.0-1.0	>6.0	Apparent	---	Long	Frequent	Long	Frequent
3108A:										
Bonnie, frequently flooded	C/D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Frequent	Brief	Frequent
		Jul-Dec	>6.0	>6.0	---	---	---	---	---	---
3142A:										
Patton, frequently flooded	B/D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	Brief	Frequent
		Jul-Dec	>6.0	>6.0	---	---	---	---	---	---
3178A:										
Ruark, frequently flooded	C/D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	Brief	Frequent
		Jul-Dec	>6.0	>6.0	---	---	---	---	---	---
3231A:										
Evansville, frequently flooded	B/D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	Brief	Frequent
		Jul-Dec	>6.0	>6.0	---	---	---	---	---	---

Table 22.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Months	Water table: Upper limit	Water table: Lower limit	Water table: Kind of water table	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft		Ft				
3302A:										
Ambraw, frequently flooded	C/D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	Brief	Frequent
		Jul-Dec	>6.0	>6.0	---	---	---	---	---	---
3304A:										
Landes, frequently flooded	A	Jan-May	>6.0	>6.0	---	---	---	None	Brief	Frequent
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	---
3331A:										
Haymond, frequently flooded	B	Jan-May	>6.0	>6.0	---	---	---	None	Brief	Frequent
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	---
3333A:										
Wakeland, frequently flooded	B/D	Jan-May	0.5-2.0	>6.0	Apparent	---	---	None	Brief	Frequent
		Jun	>6.0	>6.0	---	---	---	None	Brief	Frequent
		Jul-Dec	>6.0	>6.0	---	---	---	None	---	---
3382A:										
Belknap, frequently flooded	B/D	Jan-May	0.5-2.0	>6.0	Apparent	---	---	None	Brief	Frequent
		Jun	>6.0	>6.0	---	---	---	None	Brief	Frequent
		Jul-Dec	>6.0	>6.0	---	---	---	None	---	---
3420A:										
Piopolis, frequently flooded	C/D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Frequent	Brief	Frequent
		Jul-Dec	>6.0	>6.0	---	---	---	---	---	---
3465A:										
Montgomery, frequently flooded	D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Frequent	Brief	Frequent
		Jul-Dec	>6.0	>6.0	---	---	---	---	---	---
3524A:										
Zipp, frequently flooded	D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Frequent	Brief	Frequent
		Jul-Dec	>6.0	>6.0	---	---	---	---	---	---
3597A:										
Armiesburg, frequently flooded	B	Jan-May	>6.0	>6.0	---	---	---	None	Brief	Frequent
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	---
3601A:										
Nolin, frequently flooded	B	Jan-May	>6.0	>6.0	---	---	---	None	Brief	Frequent
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	---
3602A:										
Newark, frequently flooded	B/D	Jan-May	0.5-2.0	>6.0	Apparent	---	---	None	Brief	Frequent
		Jun	>6.0	>6.0	---	---	---	None	Brief	Frequent
		Jul-Dec	>6.0	>6.0	---	---	---	None	---	---

Table 22.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Months	Water table: Upper limit	Water table: Lower limit	Water table: Kind of water table	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft		Ft				
3665A:										
Stonelick, frequently flooded	B	Jan-May	>6.0	>6.0	---	---	---	None	Brief	Frequent
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	---
7087A:										
Dickinson, rarely flooded	A	Jan-May	>6.0	>6.0	---	---	---	None	---	Rare
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	---
7109A:										
Racoon, rarely flooded	C/D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	---	Rare
		Jul-Dec	>6.0	>6.0	---	---	---	---	---	---
7131A:										
Alvin, rarely flooded	A	Jan-May	>6.0	>6.0	---	---	---	None	---	Rare
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	---
7131B:										
Alvin, rarely flooded	A	Jan-May	>6.0	>6.0	---	---	---	None	---	Rare
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	---
7142A:										
Patton, rarely flooded	B/D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	---	Rare
		Jul-Dec	>6.0	>6.0	---	---	---	---	---	---
7142A+:										
Patton, rarely flooded, overwash	B/D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	---	Rare
		Jul-Dec	>6.0	>6.0	---	---	---	---	---	---
7173A:										
McGary, rarely flooded	C	Jan-May	1.0-3.0	>6.0	Apparent	---	---	None	---	Rare
		Jun	>6.0	>6.0	---	---	---	None	---	Rare
		Jul-Dec	>6.0	>6.0	---	---	---	None	---	---
7173B2:										
McGary, rarely flooded	C	Jan-May	1.0-3.0	>6.0	Apparent	---	---	None	---	Rare
		Jun	>6.0	>6.0	---	---	---	None	---	Rare
		Jul-Dec	>6.0	>6.0	---	---	---	None	---	---
7176A:										
Marissa, rarely flooded	C	Jan-May	1.0-3.0	>6.0	Apparent	---	---	None	---	Rare
		Jun	>6.0	>6.0	---	---	---	None	---	Rare
		Jul-Dec	>6.0	>6.0	---	---	---	None	---	---
7178A:										
Ruark, rarely flooded	C/D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	---	Rare
		Jul-Dec	>6.0	>6.0	---	---	---	---	---	---
7184A:										
Roby, rarely flooded	B	Jan-May	1.0-3.0	>6.0	Apparent	---	---	None	---	Rare
		Jun	>6.0	>6.0	---	---	---	None	---	Rare
		Jul-Dec	>6.0	>6.0	---	---	---	None	---	---
7208A:										
Sexton, rarely flooded	C/D	Jan-Jun	0.0-1.0	1.0-6.0	Perched	0.0-0.5	Brief	Frequent	---	Rare
		Jul-Dec	>6.0	>6.0	---	---	---	---	---	---

Table 22.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Months	Water table: Upper limit	Water table: Lower limit	Water table: Kind of water table	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft		Ft				
7434A:										
Ridgway, rarely flooded	B	Jan-May	>6.0	>6.0	---	---	---	None	---	Rare
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	---
7434B:										
Ridgway, rarely flooded	B	Jan-May	>6.0	>6.0	---	---	---	None	---	Rare
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	---
7436A:										
Meadowbank, rarely flooded	B	Jan-May	>6.0	>6.0	---	---	---	None	---	Rare
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	---
7445A:										
Newhaven, rarely flooded	C	Jan-May	1.0-3.0	>6.0	Apparent	---	---	None	---	Rare
		Jun	>6.0	>6.0	---	---	---	None	---	Rare
		Jul-Dec	>6.0	>6.0	---	---	---	None	---	---
7446A:										
Springerton, rarely flooded	B/D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	---	Rare
		Jul-Dec	>6.0	>6.0	---	---	---	---	---	---
7462A:										
Sciotoville, rarely flooded	C	Jan-Apr	1.5-3.0	3.0-6.0	Perched	---	---	None	---	Rare
		May	>6.0	>6.0	---	---	---	None	---	Rare
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	---
7462B:										
Sciotoville, rarely flooded	C	Jan-Apr	1.5-3.0	3.0-6.0	Perched	---	---	None	---	Rare
		May	>6.0	>6.0	---	---	---	None	---	Rare
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	---
7465A:										
Montgomery, rarely flooded	D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	---	Rare
		Jul-Dec	>6.0	>6.0	---	---	---	---	---	---
7467B2:										
Markland, rarely flooded	C	Jan-May	>6.0	>6.0	---	---	---	None	---	Rare
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	---
7467C2:										
Markland, rarely flooded	C	Jan-May	>6.0	>6.0	---	---	---	None	---	Rare
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	---
7482B:										
Uniontown, rarely flooded	C	Jan-Apr	2.0-3.5	>6.0	Apparent	---	---	None	---	Rare
		May	>6.0	>6.0	---	---	---	None	---	Rare
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	---

Table 22.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Months	Water table: Upper limit	Water table: Lower limit	Water table: Kind of water table	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft		Ft				
7482C2:										
Uniontown, rarely flooded--------------	C	Jan-Apr	2.0-3.5	>6.0	Apparent	---	---	None	---	Rare
		May	>6.0	>6.0	---	---	---	None	---	Rare
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	---
7483A:										
Henshaw, rarely flooded--------------	C	Jan-May	0.5-2.0	>6.0	Apparent	---	---	None	---	Rare
		Jun	>6.0	>6.0	---	---	---	None	---	Rare
		Jul-Dec	>6.0	>6.0	---	---	---	None	---	---
7484A:										
Harco, rarely flooded	B/D	Jan-May	1.0-2.0	>6.0	Apparent	---	---	None	---	Rare
		Jun	>6.0	>6.0	---	---	---	None	---	Rare
		Jul-Dec	>6.0	>6.0	---	---	---	None	---	---
7524A:										
Zipp, rarely flooded--	D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	---	Rare
		Jul-Dec	>6.0	>6.0	---	---	---	---	---	---
7524A+:										
Zipp, rarely flooded, overwash-------------	D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	---	Rare
		Jul-Dec	>6.0	>6.0	---	---	---	---	---	---
7750A:										
Skelton, rarely flooded--------------	B	Jan-May	>6.0	>6.0	---	---	---	None	---	Rare
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	---
7750B:										
Skelton, rarely flooded--------------	B	Jan-May	>6.0	>6.0	---	---	---	None	---	Rare
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	---
7750C2:										
Skelton, rarely flooded--------------	B	Jan-May	>6.0	>6.0	---	---	---	None		Rare
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	---
7751A:										
Crawleyville, rarely flooded--------------	B/D	Jan-May	0.5-2.0	>6.0	Apparent	---	---	None		Rare
		Jun	>6.0	>6.0	---	---	---	None	---	Rare
		Jul-Dec	>6.0	>6.0	---	---	---	None	---	---
7787A:										
Banlic, rarely flooded	C	Jan-May	0.5-2.0	2.0-6.0	Perched	---	---	None		Rare
		Jun	>6.0	>6.0	---	---	---	None		Rare
		Jul-Dec	>6.0	>6.0	---	---	---	None	---	---
7812E:										
Typic Hapludalfs, rarely flooded-------	B	Jan-May	>6.0	>6.0	---	---	---	None	---	Rare
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	---

Table 22.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Months	Water table: Upper limit	Water table: Lower limit	Water table: Kind of water table	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft		Ft				
8072A:										
Sharon, occasionally flooded	B	Jan-Apr	3.0-6.0	>6.0	Apparent	---	---	None	Brief	Occasional
		May	>6.0	>6.0	---	---	---	None	Brief	Occasional
		Jun-Dec	>6.0	>6.0	---	---	---	None	---	---
8460A:										
Ginat, occasionally flooded	D	Jan-Jun	0.0-1.0	1.0-6.0	Perched	0.0-0.5	Brief	Occasional	Brief	Occasional
		Jul-Dec	>6.0	>6.0	---	---	---	---	---	---

Table 23.--Soil Features

(See text for definitions of terms used in this table. Absence of an entry indicates that the feat
that data were not estimated)

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Hardness	Initial	Total	
		In		In	In	
2A:						
Cisne	Abrupt textural change	15-23	---	---	---	High
3A:						
Hoyleton	---	---	---	---	---	Moderate
3B:						
Hoyleton	---	---	---	---	---	Moderate
8D2:						
Hickory, eroded	---	---	---	---	---	Moderate
8F:						
Hickory	---	---	---	---	---	Moderate
12A:						
Wynoose	Abrupt textural change	13-23	---	---	---	High
13A:						
Bluford	---	---	---	---	---	High
13B:						
Bluford	---	---	---	---	---	High
13B2:						
Bluford, eroded	---	---	---	---	---	High
14B:						
Ava	Fragipan	25-40	Weakly cemented	---	---	High
14B2:						
Ava, eroded	Fragipan	25-40	Weakly cemented	---	---	High
14C2:						
Ava, eroded	Fragipan	25-40	Weakly cemented	---	---	High
14C3:						
Ava, severely eroded	Fragipan	25-40	Weakly cemented	---	---	High

Table 23.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Hardness	Initial	Total	
		In		In	In	
15B:						
Parke	---	---	---	---	---	High
15C2:						
Parke, eroded	---	---	---	---	---	High
15D2:						
Parke, eroded	---	---	---	---	---	High
19F:						
Sylvan	---	---	---	---	---	High
53B:						
Bloomfield	---	---	---	---	---	Low
53C:						
Bloomfield	---	---	---	---	---	Low
53D:						
Bloomfield	---	---	---	---	---	Low
75B:						
Drury	---	---	---	---	---	High
87A:						
Dickinson	---	---	---	---	---	Moderate
87B:						
Dickinson	---	---	---	---	---	Moderate
109A:						
Racoon	---	---	---	---	---	High
131A:						
Alvin	---	---	---	---	---	Moderate
131B:						
Alvin	---	---	---	---	---	Moderate
131C:						
Alvin	---	---	---	---	---	Moderate
131F:						
Alvin	---	---	---	---	---	Moderate

Table 23.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Hardness	Initial	Total	
		In		In	In	
142A:						
Patton	---	---	---	---	---	High
142A+:						
Patton, overwash	---	---	---	---	---	High
164A:						
Stoy	---	---	---	---	---	High
164B:						
Stoy	---	---	---	---	---	High
165A:						
Weir	---	---	---	---	---	High
173A:						
McGary	---	---	---	---	---	High
173B2:						
McGary, eroded	---	---	---	---	---	High
176A:						
Marissa	---	---	---	---	---	High
178A:						
Ruark	---	---	---	---	---	High
184A:						
Roby	---	---	---	---	---	Moderate
208A:						
Sexton	---	---	---	---	---	High
214B:						
Hosmer	Fragipan	20-36	Weakly cemented	---	---	High
214B2:						
Hosmer, eroded	Fragipan	20-36	Weakly cemented	---	---	High
214C2:						
Hosmer, eroded	Fragipan	20-36	Weakly cemented	---	---	High
214C3:						
Hosmer, severely eroded	Fragipan	20-36	Weakly cemented	---	---	High

Table 23.--Soil Features--Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Hardness	Subsidence: Initial	Subsidence: Total	Potential for frost action
		In		In	In	
231A:						
Evansville	---	---	---	---	---	High
301B:						
Grantsburg	Fragipan	24-40	Weakly cemented	---	---	High
308B:						
Alford	---	---	---	---	---	High
308B2:						
Alford, eroded	---	---	---	---	---	High
308C2:						
Alford, eroded	---	---	---	---	---	High
308C3:						
Alford, severely eroded	---	---	---	---	---	High
308D2:						
Alford, eroded	---	---	---	---	---	High
308D3:						
Alford, severely eroded	---	---	---	---	---	High
337A:						
Creal	---	---	---	---	---	High
339F:						
Wellston	Lithic bedrock	40-72	Indurated	---	---	High
	Paralithic bedrock	40-72	Moderately cemented			
340C2:						
Zanesville, eroded	Fragipan	19-32	Weakly cemented	---	---	High
	Lithic bedrock	40-80	Indurated			
	Paralithic bedrock	40-80	Moderately cemented			
340C3:						
Zanesville, severely eroded	Fragipan	19-32	Weakly cemented	---	---	High
	Lithic bedrock	40-80	Indurated			
	Paralithic bedrock	40-80	Moderately cemented			

Table 23.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Hardness	Initial	Total	
		In		In	In	
340D2:						
Zanesville, eroded	Fragipan	19-32	Weakly cemented	---	---	High
	Lithic bedrock	40-80	Indurated			
	Paralithic bedrock	40-80	Moderately cemented			
340D3:						
Zanesville, severely eroded	Fragipan	19-32	Weakly cemented	---	---	High
	Lithic bedrock	40-80	Indurated			
	Paralithic bedrock	40-80	Moderately cemented			
434A:						
Ridgway	Strongly contrasting textural stratification	36-80	---	---	---	High
434B:						
Ridgway	Strongly contrasting textural stratification	36-80	---	---	---	High
434C2:						
Ridgway, eroded	Strongly contrasting textural stratification	36-80	---	---	---	High
436A:						
Meadowbank	Strongly contrasting textural stratification	40-80	---	---	---	High
436B:						
Meadowbank	Strongly contrasting textural stratification	40-80	---	---	---	High
445A:						
Newhaven	---	---	---	---	---	Moderate

Table 23.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Hardness	Initial	Total	
		In		In	In	
446A:						
Springerton	---	---	---	---	---	High
453B:						
Muren	---	---	---	---	---	High
467B2:						
Markland, eroded	---	---	---	---	---	Moderate
467C2:						
Markland, eroded	---	---	---	---	---	Moderate
467C3:						
Markland, severely eroded	---	---	---	---	---	Moderate
482B:						
Uniontown	---	---	---	---	---	High
482B2:						
Uniontown, eroded	---	---	---	---	---	High
482C2:						
Uniontown, eroded	---	---	---	---	---	High
482C3:						
Uniontown, severely eroded	---	---	---	---	---	High
483A:						
Henshaw	---	---	---	---	---	High
484A:						
Harco	---	---	---	---	---	High
585F:						
Negley	---	---	---	---	---	Moderate
630C3:						
Navlys, severely eroded	---	---	---	---	---	High
630D3:						
Navlys, severely eroded	---	---	---	---	---	High
750A:						
Skelton	---	---	---	---	---	Moderate

Table 23.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Hardness	Initial	Total	
		In		In	In	
750B:						
Skelton	---	---	---	---	---	Moderate
750C2:						
Skelton, eroded	---	---	---	---	---	Moderate
751A:						
Crawleyville	---	---	---	---	---	High
784F:						
Berks	Lithic bedrock	20-40	Indurated	---	---	Moderate
	Paralithic bedrock	20-40	Moderately cemented			
802B:						
Orthents, loamy	---	---	---	---	---	Moderate
865.						
Pits, gravel						
898G:						
Sylvan	---	---	---	---	---	High
Hickory	---	---	---	---	---	Moderate
908G:						
Kell	Paralithic bedrock	20-40	Moderately cemented	---	---	Moderate
Hickory	---	---	---	---	---	Moderate
929D3:						
Hickory, severely eroded	---	---	---	---	---	Moderate
Ava, severely eroded	Fragipan	25-40	Weakly cemented	---	---	High
1288A:						
Petrolia, undrained, frequently flooded	---	---	---	---	---	High
3092A:						
Sarpy, frequently flooded	---	---	---	---	---	Low

Table 23.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Hardness	Initial	Total	
		In		In	In	
3103L:						
Houghton, frequently flooded	---	---	---	1-4	55-60	High
3108A:						
Bonnie, frequently flooded	---	---	---	---	---	High
3142A:						
Patton, frequently flooded	---	---	---	---	---	High
3178A:						
Ruark, frequently flooded	---	---	---	---	---	High
3231A:						
Evansville, frequently flooded	---	---	---	---	---	High
3302A:						
Ambraw, frequently flooded	---	---	---	---	---	High
3304A:						
Landes, frequently flooded	---	---	---	---	---	Moderate
3331A:						
Haymond, frequently flooded	---	---	---	---	---	High
3333A:						
Wakeland, frequently flooded	---	---	---	---	---	High
3382A:						
Belknap, frequently flooded	---	---	---	---	---	High
3420A:						
Piopolis, frequently flooded	---	---	---	---	---	High

Table 23.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Hardness	Initial	Total	
		In		In	In	
3465A: Montgomery, frequently flooded	---	---	---	---	---	High
3524A: Zipp, frequently flooded	---	---	---	---	---	High
3597A: Armiesburg, frequently flooded	---	---	---	---	---	High
3601A: Nolin, frequently flooded	---	---	---	---	---	High
3602A: Newark, frequently flooded	---	---	---	---	---	High
3665A: Stonelick, frequently flooded	---	---	---	---	---	Moderate
7087A: Dickinson, rarely flooded	---	---	---	---	---	Moderate
7109A: Racoon, rarely flooded	---	---	---	---	---	High
7131A: Alvin, rarely flooded	---	---	---	---	---	Moderate
7131B: Alvin, rarely flooded	---	---	---	---	---	Moderate
7142A: Patton, rarely flooded	---	---	---	---	---	High
7142A+: Patton, rarely flooded, overwash	---	---	---	---	---	High

Table 23.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Hardness	Initial	Total	
		In		In	In	
7173A:						
McGary, rarely flooded	---	---	---	---	---	High
7173B2:						
McGary, rarely flooded	---	---	---	---	---	High
7176A:						
Marissa, rarely flooded	---	---	---	---	---	High
7178A:						
Ruark, rarely flooded--	---	---	---	---	---	High
7184A:						
Roby, rarely flooded---	---	---	---	---	---	Moderate
7208A:						
Sexton, rarely flooded	---	---	---	---	---	High
7434A:						
Ridgway, rarely flooded	Strongly contrasting textural stratification	36-80	---	---	---	High
7434B:						
Ridgway, rarely flooded	Strongly contrasting textural stratification	36-80	---	---	---	High
7436A:						
Meadowbank, rarely flooded---------------	Strongly contrasting textural stratification	40-80	---	---	---	High
7445A:						
Newhaven, rarely flooded---------------	---	---	---	---	---	Moderate
7446A:						
Springerton, rarely flooded---------------	---	---	---	---	---	High

Table 23.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Hardness	Initial	Total	
		In		In	In	
7462A: Sciotoville, rarely flooded	---	---	---	---	---	Moderate
7462B: Sciotoville, rarely flooded	---	---	---	---	---	Moderate
7465A: Montgomery, rarely flooded	---	---	---	---	---	High
7467B2: Markland, rarely flooded	---	---	---	---	---	Moderate
7467C2: Markland, rarely flooded	---	---	---	---	---	Moderate
7482B: Uniontown, rarely flooded	---	---	---	---	---	High
7482C2: Uniontown, rarely flooded	---	---	---	---	---	High
7483A: Henshaw, rarely flooded	---	---	---	---	---	High
7484A: Harco, rarely flooded	---	---	---	---	---	High
7524A: Zipp, rarely flooded	---	---	---	---	---	High
7524A+: Zipp, rarely flooded, overwash	---	---	---	---	---	High
7750A: Skelton, rarely flooded	---	---	---	---	---	Moderate

Table 23.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Hardness	Initial	Total	
		In		In	In	
7750B:						
Skelton, rarely flooded	---	---	---	---	---	Moderate
7750C2:						
Skelton, rarely flooded	---	---	---	---	---	Moderate
7751A:						
Crawleyville, rarely flooded	---	---	---	---	---	High
7787A:						
Banlic, rarely flooded	---	---	---	---	---	High
7812E:						
Typic Hapludalfs, rarely flooded	---	---	---	---	---	Moderate
8072A:						
Sharon, occasionally flooded	---	---	---	---	---	High
8460A:						
Ginat, occasionally flooded	---	---	---	---	---	High

Table 24.--Classification of the Soils

(An asterisk in the first column indicates a taxadjunct to the series. See text for a description of those characteristics that are outside the range of the series)

Soil name	Family or higher taxonomic class
Alford	Fine-silty, mixed, superactive, mesic Ultic Hapludalfs
Alvin	Coarse-loamy, mixed, superactive, mesic Typic Hapludalfs
Ambraw	Fine-loamy, mixed, superactive, mesic Fluvaquentic Endoaquolls
Armiesburg	Fine-silty, mixed, superactive, mesic Fluventic Hapludolls
Ava	Fine-silty, mixed, active, mesic Oxyaquic Fragiudalfs
*Banlic	Coarse-silty, mixed, active, mesic Fragiaquic Dystrudepts
Belknap	Coarse-silty, mixed, active, acid, mesic Fluvaquentic Endoaquepts
Berks	Loamy-skeletal, mixed, active, mesic Typic Dystrudepts
Bloomfield	Sandy, mixed, mesic Lamellic Hapludalfs
Bluford	Fine, smectitic, mesic Aeric Fragic Epiaqualfs
Bonnie	Fine-silty, mixed, active, acid, mesic Typic Fluvaquents
Cisne	Fine, smectitic, mesic Mollic Albaqualfs
Crawleyville	Fine-loamy, mixed, active, mesic Aeric Endoaqualfs
Creal	Fine-silty, mixed, superactive, mesic Aeric Endoaqualfs
Dickinson	Coarse-loamy, mixed, superactive, mesic Typic Hapludolls
Drury	Fine-silty, mixed, superactive, mesic Dystric Eutrudepts
Evansville	Fine-silty, mixed, superactive, nonacid, mesic Typic Endoaquepts
*Ginat	Fine-silty, mixed, active, mesic Fragic Epiaqualfs
Grantsburg	Fine-silty, mixed, active, mesic Oxyaquic Fragiudalfs
Hapludalfs	Typic Hapludalfs
Harco	Fine-silty, mixed, superactive, mesic Aquic Argiudolls
Haymond	Coarse-silty, mixed, superactive, mesic Dystric Fluventic Eutrudepts
Henshaw	Fine-silty, mixed, active, mesic Aquic Hapludalfs
Hickory	Fine-loamy, mixed, active, mesic Typic Hapludalfs
Hosmer	Fine-silty, mixed, active, mesic Oxyaquic Fragiudalfs
Houghton	Euic, mesic Typic Haplosaprists
Hoyleton	Fine, smectitic, mesic Aquollic Hapludalfs
Kell	Fine-loamy, mixed, active, mesic Ultic Hapludalfs
Landes	Coarse-loamy, mixed, superactive, mesic Fluventic Hapludolls
Marissa	Fine-silty, mixed, superactive, mesic Argiaquic Argialbolls
Markland	Fine, mixed, active, mesic Typic Hapludalfs
McGary	Fine, mixed, active, mesic Aeric Epiaqualfs
Meadowbank	Fine-silty, mixed, superactive, mesic Typic Argiudolls
*Montgomery	Fine, smectitic, mesic Vertic Endoaquolls
Muren	Fine-silty, mixed, superactive, mesic Aquic Hapludalfs
Navlys	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Negley	Fine-loamy, mixed, active, mesic Typic Paleudalfs
Newark	Fine-silty, mixed, active, nonacid, mesic Fluventic Endoaquepts
Newhaven	Fine-loamy, mixed, superactive, mesic Aquic Argiudolls
Nolin	Fine-silty, mixed, active, mesic Dystric Fluventic Eutrudepts
Orthents	Fine-loamy, mixed, active, nonacid, mesic Typic Udorthents
Parke	Fine-silty, mixed, active, mesic Ultic Hapludalfs
Patton	Fine-silty, mixed, superactive, mesic Typic Endoaquolls
Petrolia	Fine-silty, mixed, superactive, nonacid, mesic Fluvaquentic Endoaquepts
Piopolis	Fine-silty, mixed, active, acid, mesic Fluvaquentic Endoaquepts
Racoon	Fine-silty, mixed, superactive, mesic Typic Endoaqualfs
Ridgway	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Roby	Coarse-loamy, mixed, superactive, mesic Aquic Hapludalfs
Ruark	Fine-loamy, mixed, active, mesic Typic Endoaqualfs
Sarpy	Mixed, mesic Typic Udipsamments
*Sciotoville	Fine-loamy, mixed, active, mesic Fragiaquic Hapludalfs
Sexton	Fine, smectitic, mesic Typic Endoaqualfs
Sharon	Coarse-silty, mixed, active, mesic Oxyaquic Dystrudepts
Skelton	Fine-loamy, mixed, active, mesic Typic Hapludalfs
Springerton	Fine-loamy, mixed, active, mesic Typic Endoaquolls
Stonelick	Coarse-loamy, mixed, superactive, calcareous, mesic Typic Udifluvents
Stoy	Fine-silty, mixed, superactive, mesic Fragiaquic Hapludalfs
Sylvan	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Uniontown	Fine-silty, mixed, superactive, mesic Oxyaquic Hapludalfs

Table 24.--Classification of the Soils--Continued

Soil name	Family or higher taxonomic class
Wakeland	Coarse-silty, mixed, superactive, nonacid, mesic Aeric Fluvaquents
Weir	Fine, smectitic, mesic Typic Endoaqualfs
Wellston	Fine-silty, mixed, active, mesic Ultic Hapludalfs
Wynoose	Fine, smectitic, mesic Typic Albaqualfs
Zanesville	Fine-silty, mixed, active, mesic Oxyaquic Fragiudalfs
Zipp	Fine, mixed, active, nonacid, mesic Typic Endoaquepts

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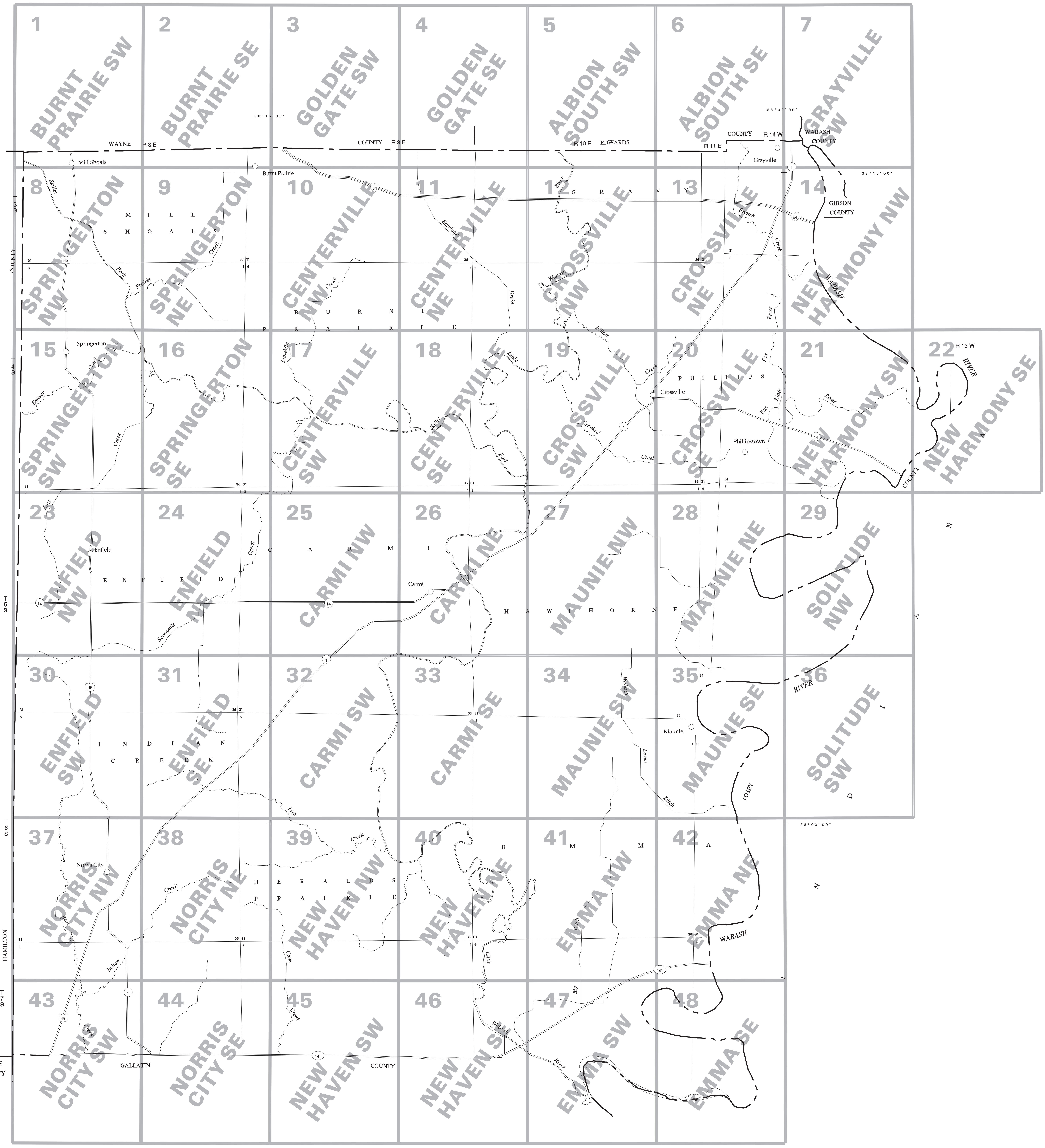

SECTIONALIZED TOWNSHIP

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

N

INDEX TO MAP SHEETS
WHITE COUNTY, ILLINOIS

MILES

KILOMETERS

SCALE = 1:90000

GEND

. The initial numbers represent the kind of soil or
indicates the class of slope, except for the letter L,
wing the slope class letter indicates that the soil is
is severely eroded. Symbols that do not have a final
that are not eroded or are only slightly eroded. Symbols
sign (+) indicates an overwash phase.

NAME

Henshaw silt loam, 0 to 2 percent slopes
Harco silt loam, 0 to 2 percent slopes
Negley loam, 18 to 35 percent slopes
Navlys silty clay loam, 5 to 10 percent slopes, severely eroded
Navlys silty clay loam, 10 to 18 percent slopes, severely eroded
Skelton fine sandy loam, 0 to 2 percent slopes
Skelton fine sandy loam, 2 to 5 percent slopes
Skelton fine sandy loam, 5 to 10 percent slopes, eroded
Crawleyville fine sandy loam, 0 to 2 percent slopes
Berks loam, 18 to 35 percent slopes
Orthents, loamy, undulating
Pits, gravel
Sylvan-Hickory silt loams, 35 to 70 percent slopes
Kell-Hickory silt loams, 35 to 70 percent slopes
Hickory-Ava complex, 10 to 18 percent slopes, severely eroded
Petrolia silty clay loam, undrained, 0 to 2 percent slopes, frequently flooded
Sarpy sandy loam, 0 to 2 percent slopes, frequently flooded
Houghton muck, 0 to 2 percent slopes, frequently flooded, long duration
Bonnie silt loam, 0 to 2 percent slopes, frequently flooded
Patton silty clay loam, 0 to 2 percent slopes, frequently flooded
Ruark loam, 0 to 2 percent slopes, frequently flooded
Evansville silt loam, 0 to 2 percent slopes, frequently flooded
Ambraw clay loam, 0 to 2 percent slopes, frequently flooded
Landes fine sandy loam, 0 to 2 percent slopes, frequently flooded
Haymond silt loam, 0 to 3 percent slopes, frequently flooded
Wakeland silt loam, 0 to 2 percent slopes, frequently flooded
Belknap silt loam, 0 to 2 percent slopes, frequently flooded
Piopolis silty clay loam, 0 to 2 percent slopes, frequently flooded
Montgomery silty clay loam, 0 to 2 percent slopes, frequently flooded
Zipp silty clay, 0 to 2 percent slopes, frequently flooded
Armiesburg silty clay loam, 0 to 2 percent slopes, frequently flooded
Nolin silty clay loam, 0 to 2 percent slopes, frequently flooded
Newark silt loam, 0 to 2 percent slopes, frequently flooded
Stonelick loam, 0 to 2 percent slopes, frequently flooded
Dickinson sandy loam, 0 to 2 percent slopes, rarely flooded
Racoon silt loam, 0 to 2 percent slopes, rarely flooded
Alvin fine sandy loam, 0 to 2 percent slopes, rarely flooded
Alvin fine sandy loam, 2 to 5 percent slopes, rarely flooded
Patton silty clay loam, 0 to 2 percent slopes, rarely flooded
Patton silt loam, 0 to 2 percent slopes, rarely flooded, overwash
McGary silt loam, 0 to 2 percent slopes, rarely flooded
McGary silt loam, 2 to 5 percent slopes, eroded, rarely flooded
Marissa silt loam, 0 to 2 percent slopes, rarely flooded
Ruark loam, 0 to 2 percent slopes, rarely flooded
Roby fine sandy loam, 0 to 2 percent slopes, rarely flooded
Sexton silt loam, 0 to 2 percent slopes, rarely flooded
Ridgway silt loam, 0 to 2 percent slopes, rarely flooded
Ridgway silt loam, 2 to 5 percent slopes, rarely flooded
Meadowbank silt loam, 0 to 2 percent slopes, rarely flooded
Newhaven loam, 0 to 2 percent slopes, rarely flooded
Springerton loam, 0 to 2 percent slopes, rarely flooded
Sciotoville silt loam, 0 to 2 percent slopes, rarely flooded
Sciotoville silt loam, 2 to 5 percent slopes, rarely flooded
Montgomery silty clay loam, 0 to 2 percent slopes, rarely flooded
Markland silt loam, 2 to 5 percent slopes, eroded, rarely flooded
Markland silt loam, 5 to 10 percent slopes, eroded, rarely flooded
Uniontown silt loam, 2 to 5 percent slopes, rarely flooded
Uniontown silt loam, 5 to 10 percent slopes, eroded, rarely flooded
Henshaw silt loam, 0 to 2 percent slopes, rarely flooded
Harco silt loam, 0 to 2 percent slopes, rarely flooded
Zipp silty clay, 0 to 2 percent slopes, rarely flooded
Zipp silt loam, 0 to 2 percent slopes, rarely flooded, overwash
Skelton fine sandy loam, 0 to 2 percent slopes, rarely flooded
Skelton fine sandy loam, 2 to 5 percent slopes, rarely flooded
Skelton fine sandy loam, 5 to 10 percent slopes, eroded, rarely flooded
Crawleyville fine sandy loam, 0 to 2 percent slopes, rarely flooded
Banlic silt loam, 0 to 2 percent slopes, rarely flooded
Typic Hapludalfs, 10 to 30 percent slopes, rarely flooded
Sharon silt loam, 0 to 2 percent slopes, occasionally flooded
Ginat silt loam, 0 to 2 percent slopes, occasionally flooded
Miscellaneous water
Water

CONVENTIONAL AND SPECIAL SYMBOLS LEGEND

CULTURAL FEATURES

BOUNDARIES

- National, state, or province
- County or parish
- Minor civil division
- Reservation (national forest or park, state forest or park)
- Land grant
- Limit of soil survey (label) and/or denied access area
- Field sheet matchline and neatline
- Previously published survey

OTHER BOUNDARY

- Airport, airfield
- Cemetery
- City/county park

STATE COORDINATE TICK
1 890 000 FEET

LAND DIVISION CORNER
(section and land grants)

GEOGRAPHIC COORDINATE TICK

TRANSPORTATION

- Divided roads
- Other roads
- Trail

ROAD EMBLEMS AND DESIGNATIONS

- Interstate 173 79 345
- Federal 287 410 224
- State 52 52 347
- County, farm or ranch 1283

RAILROAD

POWER TRANSMISSION LINE

PIPELINE

FENCE

LEVEES

- Without road
- With road
- With railroad
- Single side slope

DAMS

- Medium or small

LANDFORM FEATURES

- Prominent hill or peak
- Soil Sample Site

MISCELLANEOUS CULTURAL FEATURES

- Farmstead, house
- Church
- School
- Other religion (label) Mt Carmel
- Located object (label) Ranger Station
- Tank (label) Petroleum
- Lookout tower
- Oil and/or natural gas wells
- Windmill
- Lighthouse

HYDROGRAPHIC FEATURES

STREAMS

- Perennial stream, double line
- Perennial stream, single line — Label only
- Intermittent stream — Label only
- Drainage end — Label only

DRAINAGE AND IRRIGATION

- Double-line canal — CANAL
- Perennial drainage and/or irrigation ditch — Label only
- Intermittent drainage and/or irrigation ditch — Label only

SMALL LAKES, PONDS, AND RESERVOIRS

- Perennial water
- Miscellaneous water
- Flood pool line — FLOOD POOL LINE

MISCELLANEOUS WATER FEATURES

- Spring
- Well, artesian
- Well, irrigation

SPECIAL SYMBOLS FOR SOIL SURVEY AND SSURGO

SOIL DELINEATIONS AND SYMBOLS — 43A 152A

LANDFORM FEATURES

ESCARPMENTS

- Bedrock
- Other than bedrock
- Short steep slope
- Gully
- Depression, closed
- Sinkhole

EXCAVATIONS

PITS

- Borrow pit
- Gravel pit
- Mine or quarry
- Landfill

MISCELLANEOUS SURFACE FEATURES

- Blowout
- Clay spot
- Gravelly spot
- Lava spot
- Marsh or swamp
- Rock outcrop (includes sandstone and shale)
- Saline spot
- Sandy spot
- Severely eroded spot
- Slide or slip
- Sodic spot
- Spoil area
- Stony spot
- Very stony spot
- Wet spot

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

WHITE COUNTY, ILLINOIS
BURNT PRAIRIE SW QUADRANGLE
SHEET NUMBER 1 OF 48

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-1998 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 16.
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES

FEET

KILOMETERS

2 BURNT PRAIRIE SE
8 SPRINGERTON NW
9 SPRINGERTON NE

INDEX TO ADJOINING 3.75 MAPS

BURNT PRAIRIE SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 1 OF 48

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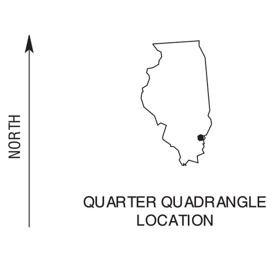

SCALE 1:12000

MILES · FEET · KILOMETERS

2	3	4	2 BURNT PRAIRIE SE
9		11	3 GOLDEN GATE SW
16	17	18	4 GOLDEN GATE SE
			9 SPRINGERTON NE
			11 CENTERVILLE NE
			16 SPRINGERTON SE
			17 CENTERVILLE SW
			18 CENTERVILLE SE

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CENTERVILLE NW, ILLINOIS
3.75 MINUTE SERIES
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UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

WHITE COUNTY, ILLINOIS
CENTERVILLE NE QUADRANGLE
SHEET NUMBER 11 OF 48

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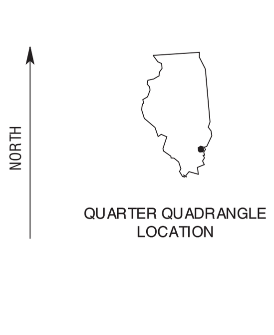

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

3	4	5
10		12
17	18	19

3 GOLDEN GATE SW
4 GOLDEN GATE SE
5 ALBION SOUTH SW
10 CENTERVILLE NW
12 CROSSVILLE NW
17 CENTERVILLE SW
18 CENTERVILLE SE
19 CROSSVILLE SW

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CENTERVILLE NE, ILLINOIS
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NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

4	5	6
11		13
18	19	20

4 GOLDEN GATE SE
5 ALBION SOUTH SW
6 ALBION SOUTH SE
11 CENTERVILLE NE
13 CROSSVILLE NE
18 CENTERVILLE SE
19 CROSSVILLE SW
20 CROSSVILLE SE

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CROSSVILLE NW, ILLINOIS
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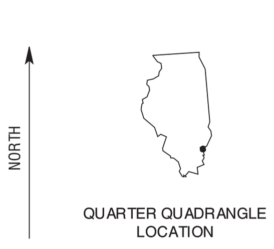
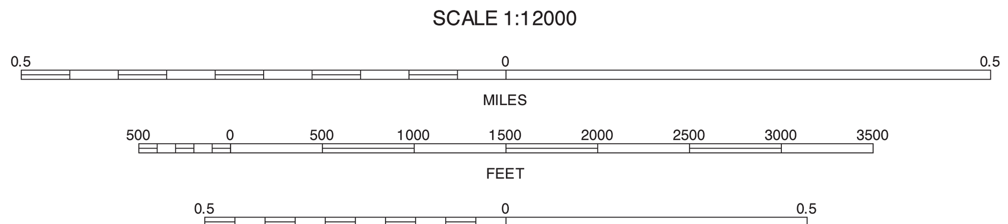


QUARTER QUADRANGLE LOCATION

SCALE 1:12000



5	6	7
12		14
19	20	21

5 ALBION SOUTH SW
6 ALBION SOUTH SE
7 GRAYVILLE SW
12 CROSSVILLE NW
14 NEW HARMONY NW
19 CROSSVILLE SW
20 CROSSVILLE SE
21 NEW HARMONY SW

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CROSSVILLE NE, ILLINOIS

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UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

WHITE COUNTY, ILLINOIS
NEW HARMONY NW QUADRANGLE
SHEET NUMBER 14 OF 48

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NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES: 0.5 0 0.5

FEET: 500 0 500 1000 1500 2000 2500 3000 3500

KILOMETERS: 0.5 0 0.5

6	7	
13	■	
20	21	22

6 ALBION SOUTH SE
7 GRAYVILLE SW
13 CROSSVILLE NE
20 CROSSVILLE SE
21 NEW HARMONY SW
22 NEW HARMONY SE

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NEW HARMONY NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 14 OF 48

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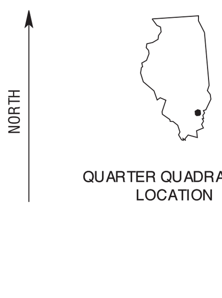

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SCALE 1:12000

MILES: 0.5 — 0 — 0.5

FEET: 500 — 0 — 500 — 1000 — 1500 — 2000 — 2500 — 3000 — 3500

KILOMETERS: 0.5 — 0 — 0.5

	8	9
	■	16
	23	24

8 SPRINGERTON NW
9 SPRINGERTON NE
16 SPRINGERTON SE
23 ENFIELD NW
24 ENFIELD NE

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SPRINGERTON SW, ILLINOIS
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NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES

FEET

KILOMETERS

8	9	10	
15		17	
23	24	25	

8 SPRINGERTON NW
9 SPRINGERTON NE
10 CENTERVILLE NW
15 SPRINGERTON SW
17 CENTERVILLE SW
23 ENFIELD NW
24 ENFIELD NE
25 CARMI NW

INDEX TO ADJOINING 3.75 MAPS

SPRINGERTON SE, ILLINOIS
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NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES

FEET

KILOMETERS

9	10	11
16		18
24	25	26

9 SPRINGERTON NE
10 CENTERVILLE NW
11 CENTERVILLE NE
16 SPRINGERTON SE
18 CENTERVILLE SE
24 ENFIELD NE
25 CARMI NW
26 CARMI NE

INDEX TO ADJOINING 3.75 MAPS

CENTERVILLE SW, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 17 OF 48

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QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

10	11	12
17		19
25	26	27

10 CENTERVILLE NW
11 CENTERVILLE NE
12 CROSSVILLE NW
17 CENTERVILLE SW
19 CROSSVILLE SW
25 CARMI NW
26 CARMI NE
27 MAUNIE NW

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CENTERVILLE SE, ILLINOIS

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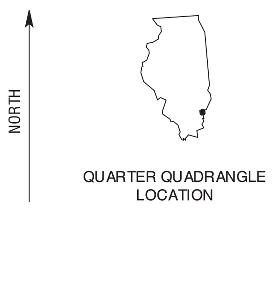

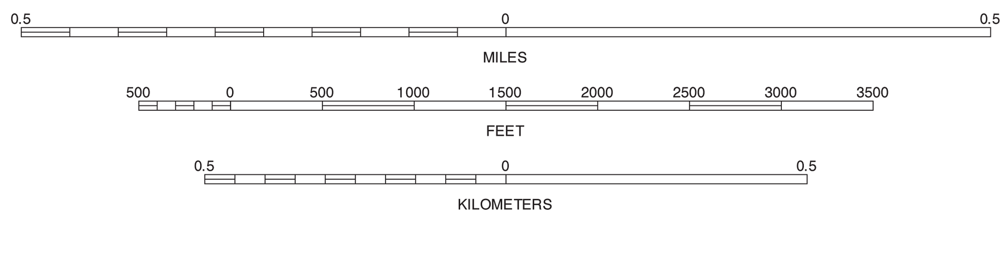

11	12	13
18		20
26	27	28

11 CENTERVILLE NE
12 CROSSVILLE NW
13 CROSSVILLE NE
18 CENTERVILLE SE
20 CROSSVILLE SE
26 CARMI NE
27 MAUNIE NW
28 MAUNIE NE

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CROSSVILLE SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 19 OF 48

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Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

1		3
8	9	10

1 BURNT PRAIRIE SW
3 GOLDEN GATE SW
8 SPRINGERTON NW
9 SPRINGERTON NE
10 CENTERVILLE NW

INDEX TO ADJOINING 3.75 MAPS

BURNT PRAIRIE SE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 2 OF 48

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UNITED STATES
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NATURAL RESOURCES CONSERVATION SERVICE

WHITE COUNTY, ILLINOIS
CROSSVILLE SE QUADRANGLE
SHEET NUMBER 20 OF 48

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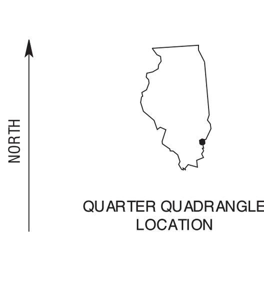

SCALE 1:12000

MILES: 0.5 — 0 — 0.5

FEET: 500 — 0 — 500 — 1000 — 1500 — 2000 — 2500 — 3000 — 3500

KILOMETERS: 0.5 — 0 — 0.5

12	13	14
19		21
27	28	29

12 CROSSVILLE NW
13 CROSSVILLE NE
14 NEW HARMONY NW
19 CROSSVILLE SW
21 NEW HARMONY SW
27 MAUNIE NW
28 MAUNIE NE
29 SOLITUDE NW

INDEX TO ADJOINING 3.75 MAPS

CROSSVILLE SE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 20 OF 48

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

WHITE COUNTY, ILLINOIS
NEW HARMONY SW QUADRANGLE
SHEET NUMBER 21 OF 48

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
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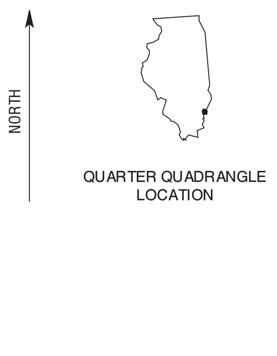
North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 — 0 — 0.5
MILES

500 — 0 — 500 — 1000 — 1500 — 2000 — 2500 — 3000 — 3500
FEET

0.5 — 0 — 0.5
KILOMETERS

13	14	
20		22
28	29	

13 CROSSVILLE NE
14 NEW HARMONY NW
20 CROSSVILLE SE
22 NEW HARMONY SE
28 MAUNIE NE
29 SOLITUDE NW

INDEX TO ADJOINING 3.75 MAPS

NEW HARMONY SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 21 OF 48

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

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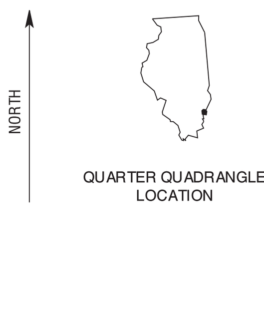
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-1998 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES	0.5	0	0.5						
FEET	500	0	500	1000	1500	2000	2500	3000	3500
KILOMETERS	0.5	0	0.5						

14		
21	■	
29		

14 NEW HARMONY NW
21 NEW HARMONY SW
29 SOLITUDE NW

INDEX TO ADJOINING 3.75 MAPS

NEW HARMONY SE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 22 OF 48

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

88° 22′30″ 88°18′45″

38° 07′30″ 38° 07′30″

38° 03′45″ 38° 03′45″

88° 22′30″ 88°18′45″

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Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-1998 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 16.
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES: 0.5 — 0 — 0.5

FEET: 500 — 0 — 500 — 1000 — 1500 — 2000 — 2500 — 3000 — 3500

KILOMETERS: 0.5 — 0 — 0.5

	15	16
		24
	30	31

15 SPRINGERTON SW
16 SPRINGERTON SE
24 ENFIELD NE
30 ENFIELD SW
31 ENFIELD SE

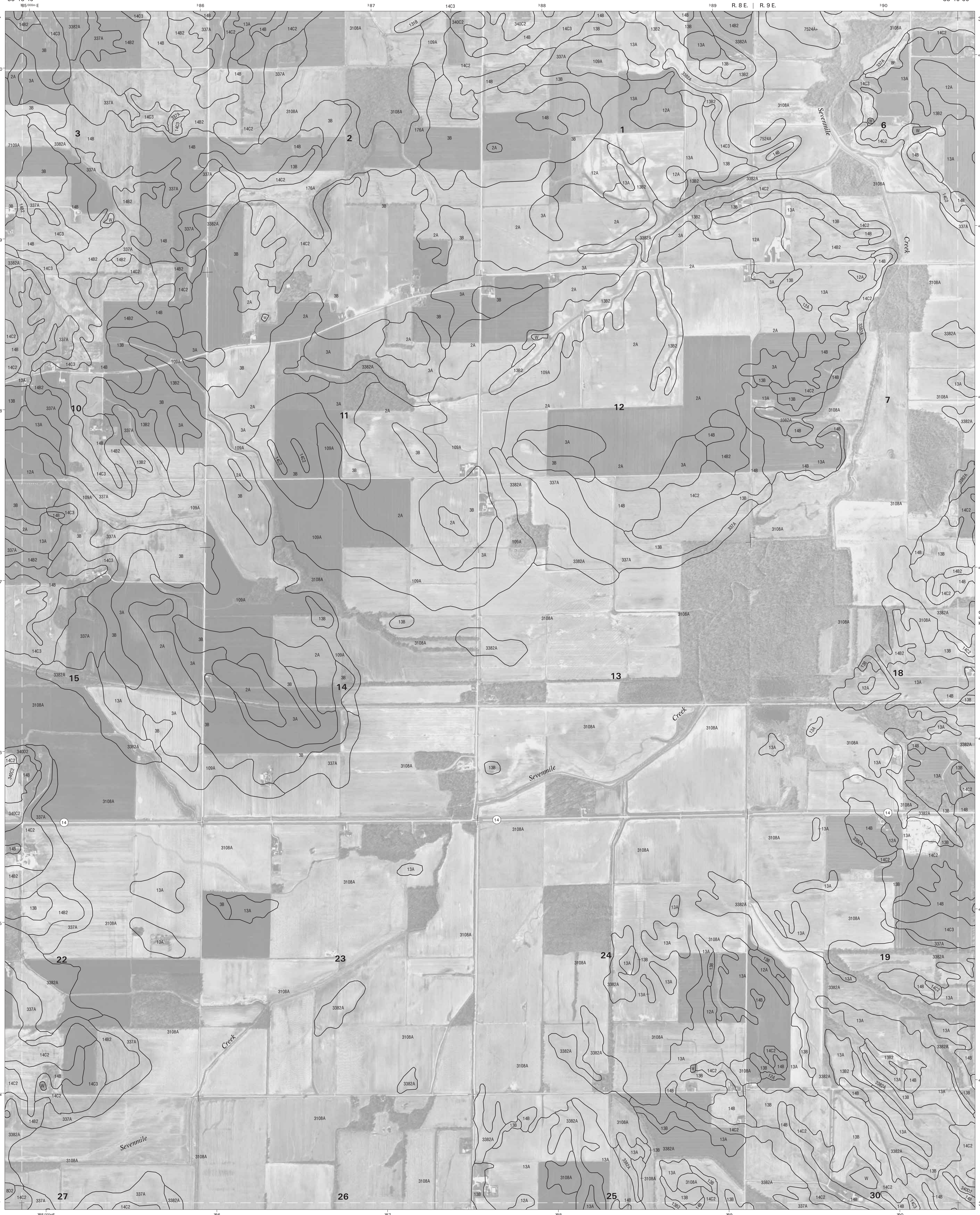
INDEX TO ADJOINING 3.75 MAPS

ENFIELD NW, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 23 OF 48

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE



SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

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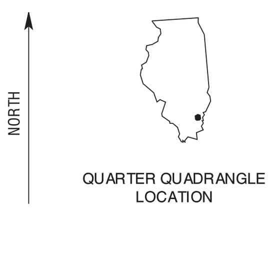
North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUARTER QUADRANGLE LOCATION

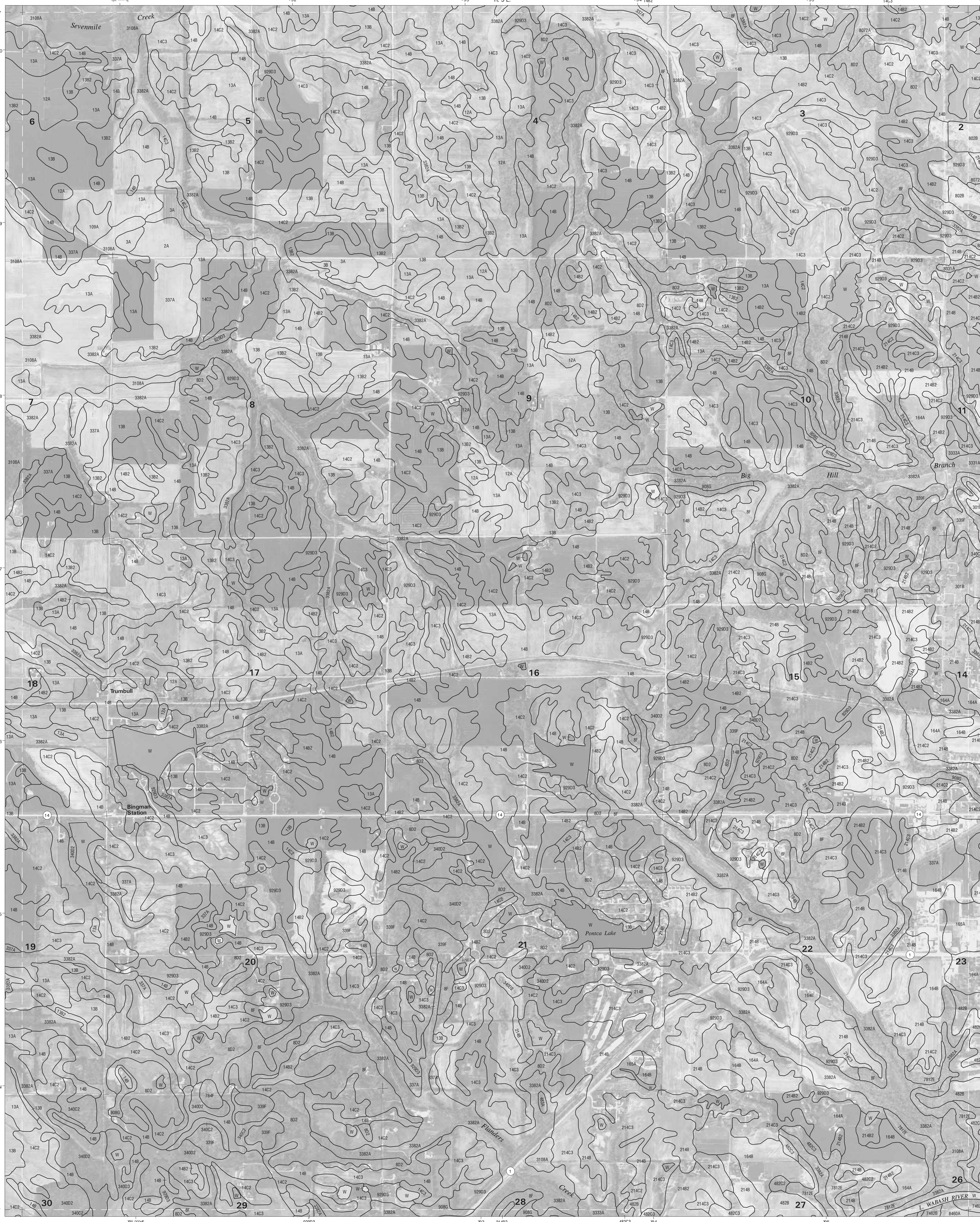
15	16	17
23		25
30	31	32

15 SPRINGERTON SW
16 SPRINGERTON SE
17 CENTERVILLE SW
23 ENFIELD NW
25 CARMI NW
30 ENFIELD SW
31 ENFIELD SE
32 CARMI SW

INDEX TO ADJOINING 3.75 MAPS

ENFIELD NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 24 OF 48

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.



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Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-1998 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 16.
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

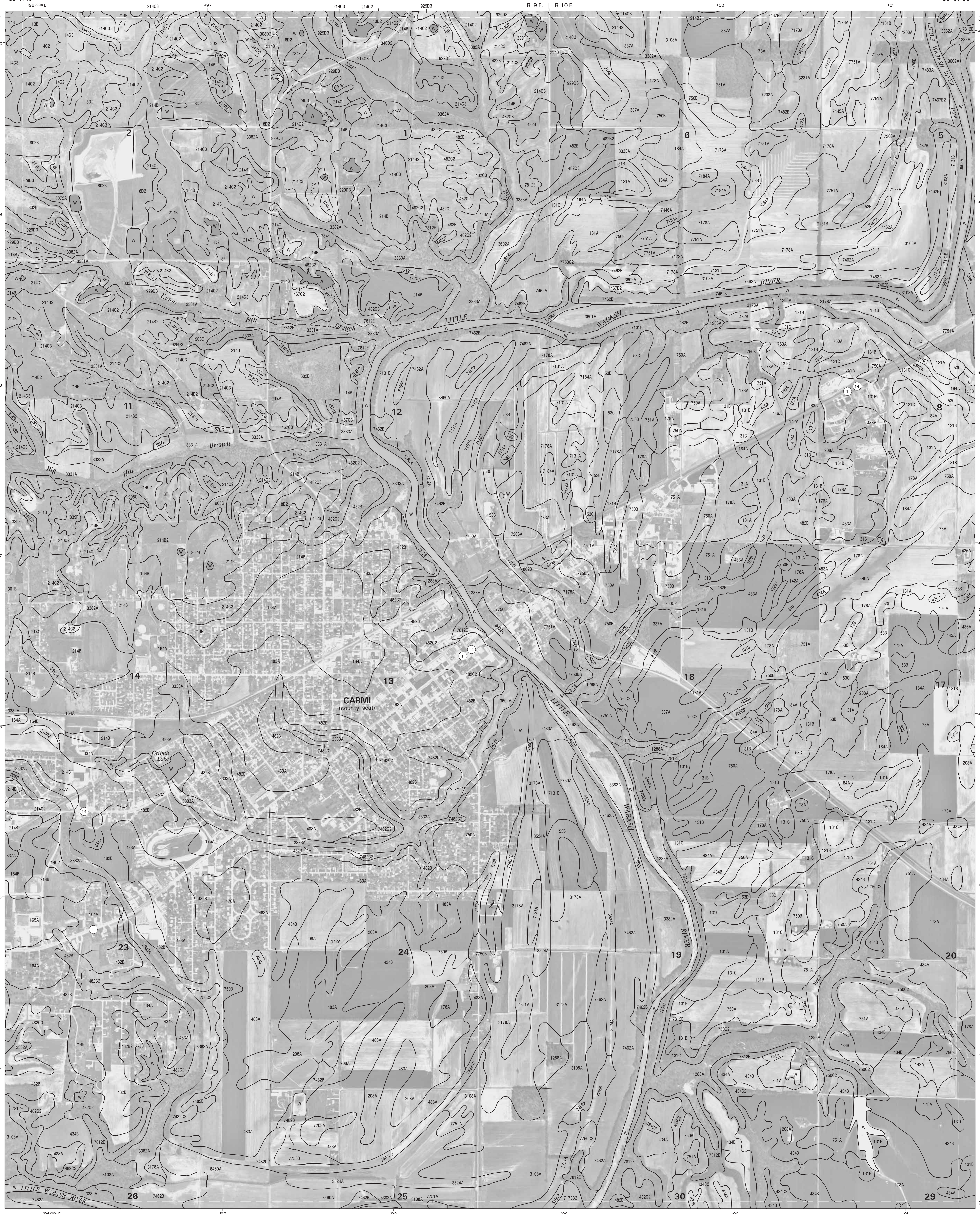
16	17	18
24		26
31	32	33

16 SPRINGERTON SE
17 CENTERVILLE SW
18 CENTERVILLE SE
24 ENFIELD NE
26 CARMI NE
31 ENFIELD SE
32 CARMI SW
33 CARMI SE

INDEX TO ADJOINING 3.75 MAPS

CARMI NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 25 OF 48

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.



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North American Datum of 1983 (NAD83). GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 16.
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES

FEET

KILOMETERS

17	18	19
25		27
32	33	34

17 CENTERVILLE SW
18 CENTERVILLE SE
19 CROSSVILLE SW
25 CARMI NW
27 MAUNIE NW
32 CARMI SW
33 CARMI SE
34 MAUNIE SW

INDEX TO ADJOINING 3.75 MAPS

CARMI NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 26 OF 48

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

88° 07′30″ 88° 03′45″

38° 07′30″ 38° 07′30″

38° 03′45″ 38° 03′45″

88° 07′30″ 88° 03′45″

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North American Datum of 1983 (NAD83). GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 16.
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

18	19	20
26		28
33	34	35

18 CENTERVILLE SE
19 CROSSVILLE SW
20 CROSSVILLE SE
26 CARMI NE
28 MAUNIE NE
33 CARMI SE
34 MAUNIE SW
35 MAUNIE SE

INDEX TO ADJOINING 3.75 MAPS

MAUNIE NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 27 OF 48

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

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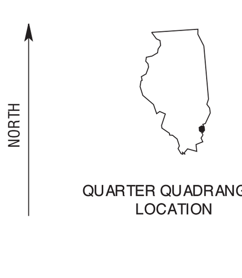
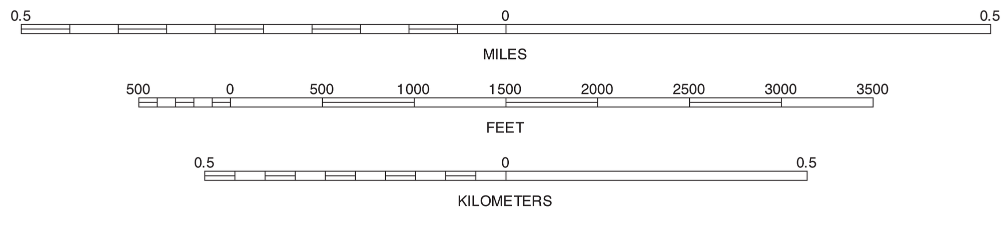
North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUARTER QUADRANGLE LOCATION

SCALE 1:12000



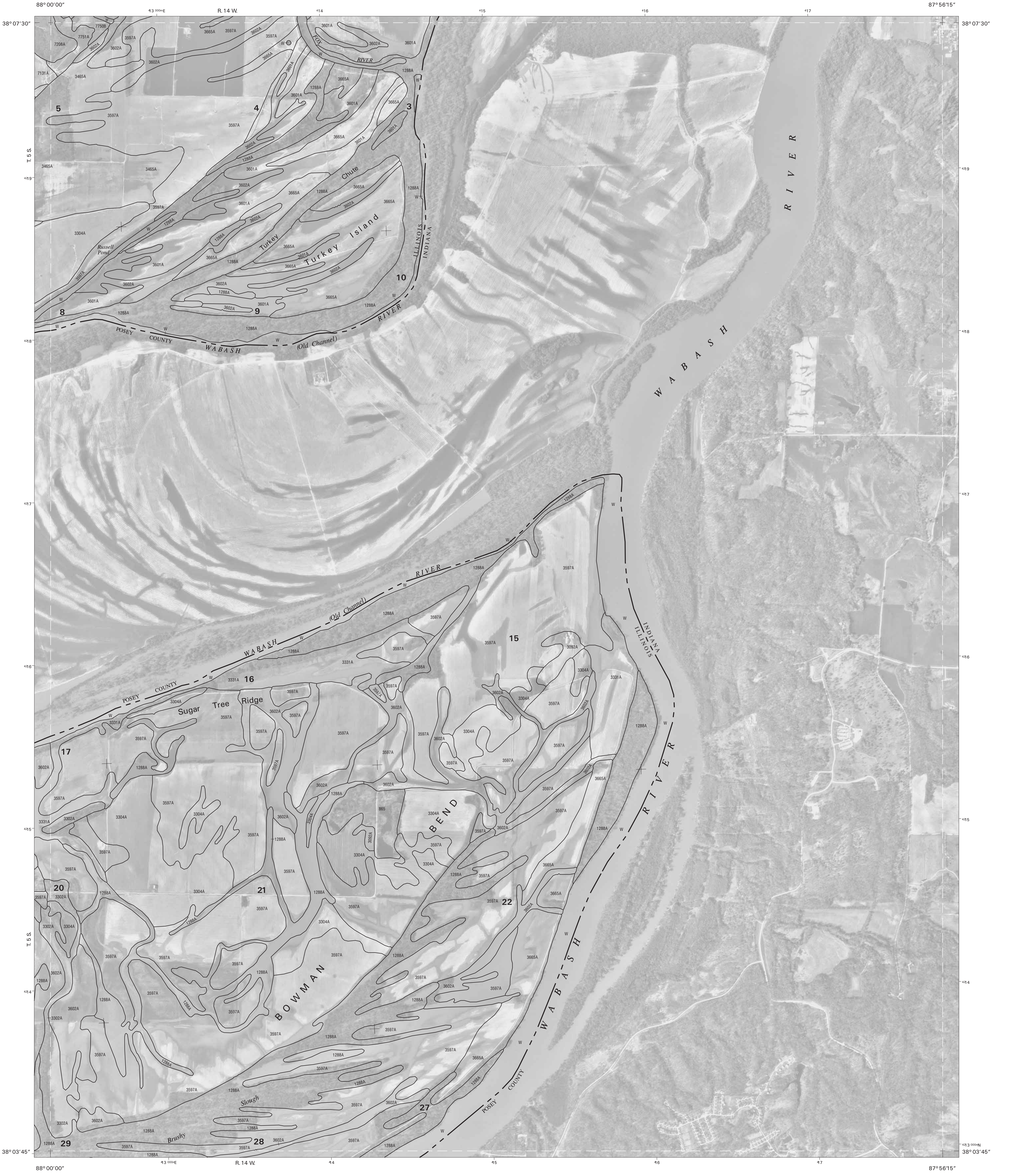
19	20	21
27		29
34	35	36

19 CROSSVILLE SW
20 CROSSVILLE SE
21 NEW HARMONY SW
27 MAUNIE NW
29 SOLITUDE NW
34 MAUNIE SW
35 MAUNIE SE
36 SOLITUDE SW

INDEX TO ADJOINING 3.75 MAPS

MAUNIE NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 28 OF 48

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.



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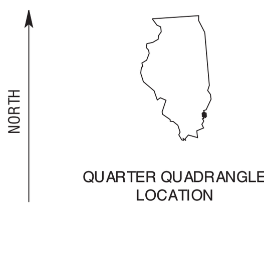
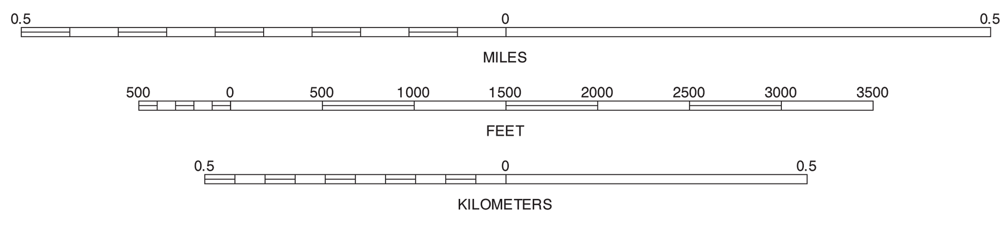
North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



SCALE 1:12000



20	21	22
28		
35	36	

20 CROSSVILLE SE
21 NEW HARMONY SW
22 NEW HARMONY SE
28 MAUNIE NE
35 MAUNIE SE
36 SOLITUDE SW

INDEX TO ADJOINING 3.75 MAPS

SOLITUDE NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 29 OF 48

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

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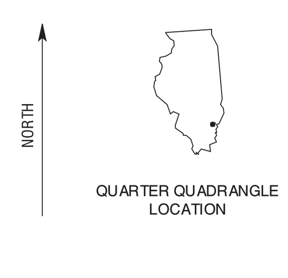
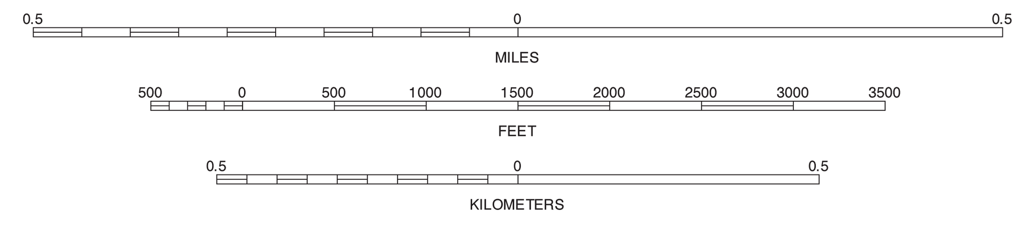
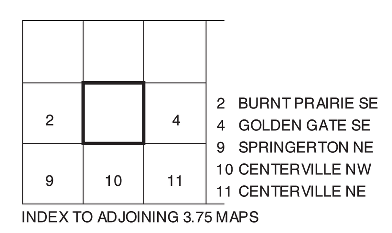
North American Datum of 1983 (NAD83). GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 16.
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUARTER QUADRANGLE LOCATION

SCALE 1:12000





INDEX TO ADJOINING 3.75 MAPS

GOLDEN GATE SW, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 3 OF 48

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

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North American Datum of 1983 (NAD83). GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 16.
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

23	24	
		31
37	38	

23 ENFIELD NW
24 ENFIELD NE
31 ENFIELD SE
37 NORRIS CITY NW
38 NORRIS CITY NE

INDEX TO ADJOINING 3.75 MAPS

ENFIELD SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 30 OF 48

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

WHITE COUNTY, ILLINOIS
ENFIELD SE QUADRANGLE
SHEET NUMBER 31 OF 48

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
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North American Datum of 1983 (NAD83). GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 16.
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES

FEET

KILOMETERS

23	24	25
30		32
37	38	39

23 ENFIELD NW
24 ENFIELD NE
25 CARMI NW
30 ENFIELD SW
32 CARMI SW
37 NORRIS CITY NW
38 NORRIS CITY NE
39 NEW HAVEN NW

INDEX TO ADJOINING 3.75 MAPS

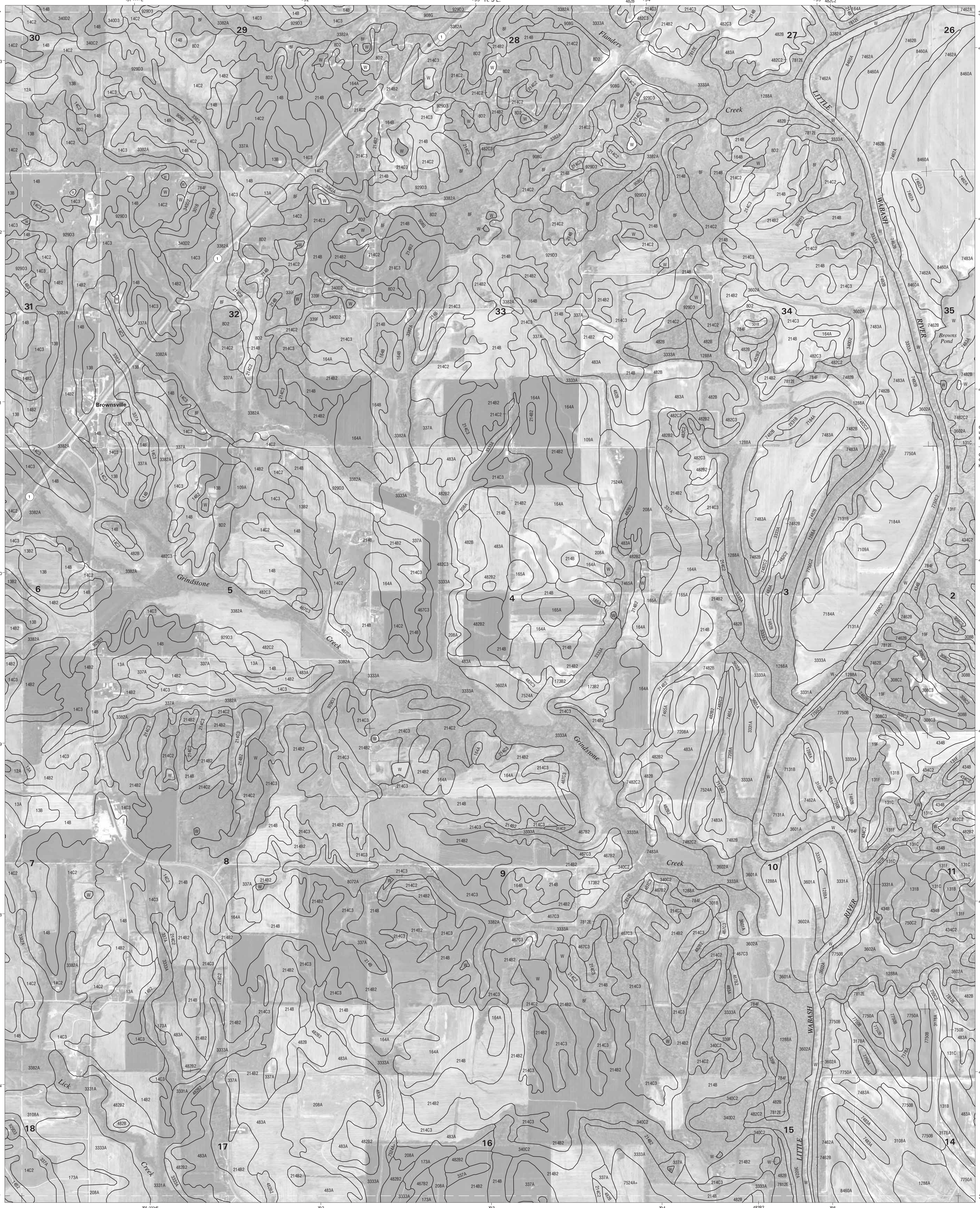
ENFIELD SE, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 31 OF 48

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

WHITE COUNTY, ILLINOIS
CARMI SW QUADRANGLE
SHEET NUMBER 32 OF 48



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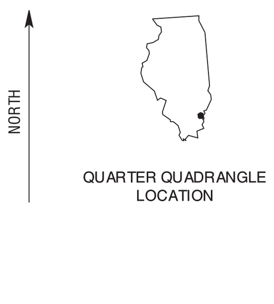
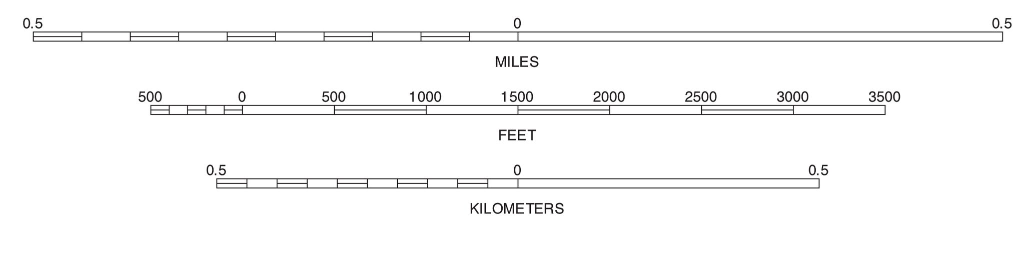
North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.





24	25	26
31		33
38	39	40

24 ENFIELD NE
25 CARMI NW
26 CARMI NE
31 ENFIELD SE
33 CARMI SE
38 NORRIS CITY NE
39 NEW HAVEN NW
40 NEW HAVEN NE

INDEX TO ADJOINING 3.75 MAPS

CARMI SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 32 OF 48

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

WHITE COUNTY, ILLINOIS
CARMI SE QUADRANGLE
SHEET NUMBER 33 OF 48

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
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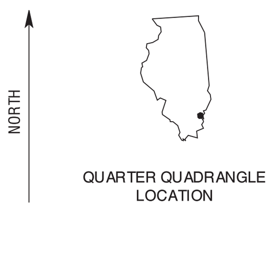
North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



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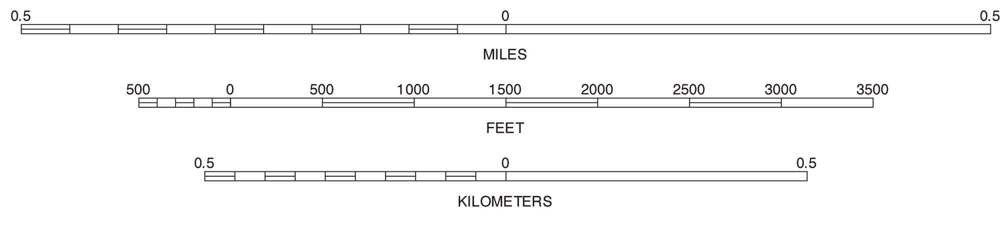


25	26	27	25 CARMI NW 26 CARMI NE 27 MAUNIE NW
32		34	32 CARMI SW 34 MAUNIE SW
39	40	41	39 NEW HAVEN NW 40 NEW HAVEN NE 41 EMMA NW

INDEX TO ADJOINING 3.75 MAPS

CARMI SE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 33 OF 48

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

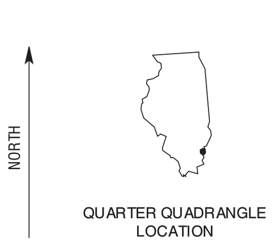
WHITE COUNTY, ILLINOIS
MAUNIE SW QUADRANGLE
SHEET NUMBER 34 OF 48

88° 07′ 30″ 88° 03′ 45″
38° 03′ 45″ 38° 03′ 45″

38° 00′ 00″ 38° 00′ 00″
88° 07′ 30″ 88° 03′ 45″

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-1998 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 16.
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUARTER QUADRANGLE
LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

26	27	28
33		35
40	41	42

26 CARMI NE
27 MAUNIE NW
28 MAUNIE NE
33 CARMI SE
35 MAUNIE SE
40 NEW HAVEN NE
41 EMMA NW
42 EMMA NE

INDEX TO ADJOINING 3.75 MAPS

MAUNIE SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 34 OF 48

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

88° 03′ 45″ — R. 10 E. | R. 11 E. — R. 11 E. | R. 14 W. — 88° 00′ 00″

38° 03′ 45″

38° 00′ 00″

88° 03′ 45″ — R. 10 E. | R. 11 E. — 88° 00′ 00″

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Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-1998 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 16.
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 — 0 — 0.5 MILES

500 — 0 — 500 — 1000 — 1500 — 2000 — 2500 — 3000 — 3500 FEET

0.5 — 0 — 0.5 KILOMETERS

27	28	29
34		36
41	42	

27 MAUNIE NW
28 MAUNIE NE
29 SOLITUDE NW
34 MAUNIE SW
36 SOLITUDE SW
41 EMMA NW
42 EMMA NE

INDEX TO ADJOINING 3.75 MAPS

MAUNIE SE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 35 OF 48

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

88° 00′00″ | R. 14 W. | 87° 56′15″

38° 03′45″

38° 00′00″

88° 00′00″ | 87° 56′15″

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Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-1998 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES: 0.5 — 0 — 0.5

FEET: 500 — 0 — 500 — 1000 — 1500 — 2000 — 2500 — 3000 — 3500

KILOMETERS: 0.5 — 0 — 0.5

28	29	
35		
42		

28 MAUNIE NE
29 SOLITUDE NW
35 MAUNIE SE
42 EMMA NE

INDEX TO ADJOINING 3.75 MAPS

SOLITUDE SW, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 36 OF 48

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

WHITE COUNTY, ILLINOIS
NORRIS CITY NW QUADRANGLE
SHEET NUMBER 37 OF 48

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-1998 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES

FEET

KILOMETERS

	30	31
		38
	43	44

30 ENFIELD SW
31 ENFIELD SE
38 NORRIS CITY NE
43 NORRIS CITY SW
44 NORRIS CITY SE

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NORRIS CITY NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 37 OF 48

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UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

WHITE COUNTY, ILLINOIS
NORRIS CITY NE QUADRANGLE
SHEET NUMBER 38 OF 48

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1000-meter ticks: Universal Transverse Mercator, zone 16.
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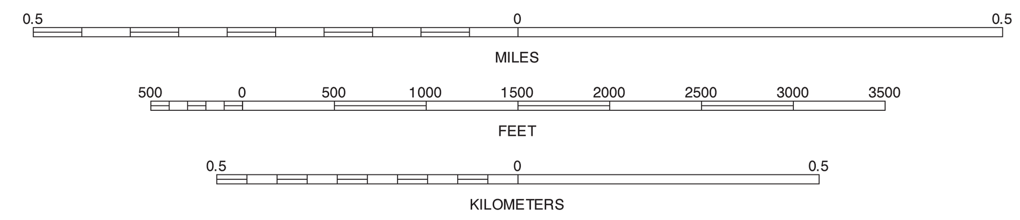
SCALE 1:12000



30	31	32
37		39
43	44	45

30 ENFIELD SW
31 ENFIELD SE
32 CARMI SW
37 NORRIS CITY NW
39 NEW HAVEN NW
43 NORRIS CITY SW
44 NORRIS CITY SE
45 NEW HAVEN SW

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NORRIS CITY NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 38 OF 48

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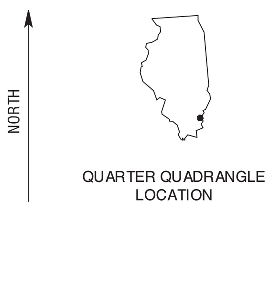

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

31	32	33
38		40
44	45	46

31 ENFIELD SE
32 CARMI SW
33 CARMI SE
38 NORRIS CITY NE
40 NEW HAVEN NE
44 NORRIS CITY SE
45 NEW HAVEN SW
46 NEW HAVEN SE

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NEW HAVEN NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 39 OF 48

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UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

WHITE COUNTY, ILLINOIS
GOLDEN GATE SE QUADRANGLE
SHEET NUMBER 4 OF 48

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NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES

FEET

KILOMETERS

3 GOLDEN GATE SW
5 ALBION SOUTH SW
10 CENTERVILLE NW
11 CENTERVILLE NE
12 CROSSVILLE NW

INDEX TO ADJOINING 3.75 MAPS

GOLDEN GATE SE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 4 OF 48

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NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES: 0.5 0 0.5

FEET: 500 0 500 1000 1500 2000 2500 3000 3500

KILOMETERS: 0.5 0 0.5

32	33	34
39		41
45	46	47

32 CARMI SW
33 CARMI SE
34 MAUNIE SW
39 NEW HAVEN NW
41 EMMA NW
45 NEW HAVEN SW
46 NEW HAVEN SE
47 EMMA SW

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NEW HAVEN NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 40 OF 48

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

WHITE COUNTY, ILLINOIS
EMMA NW QUADRANGLE
SHEET NUMBER 41 OF 48

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES

FEET

KILOMETERS

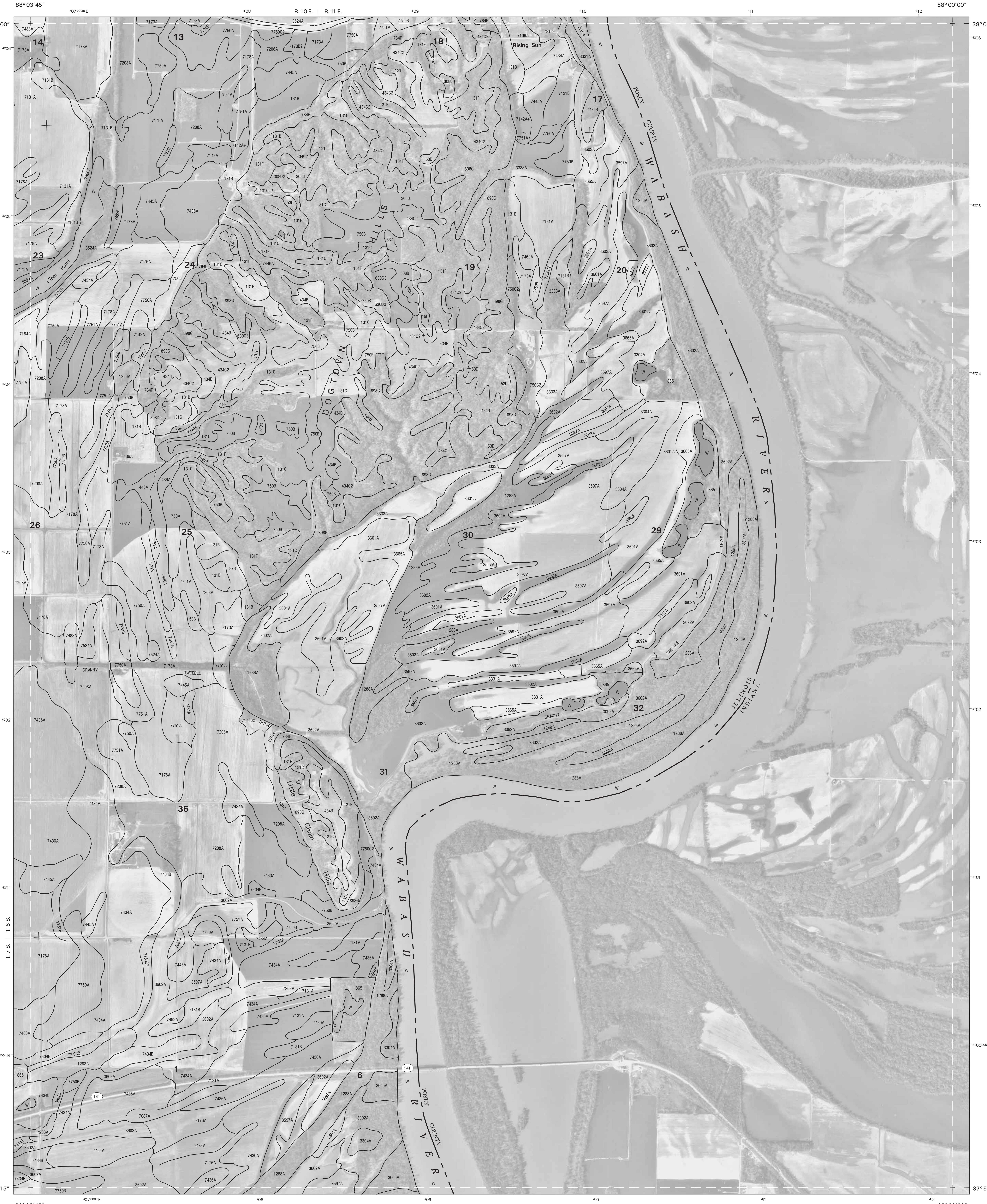
33	34	35
40		42
46	47	48

33 CARMI SE
34 MAUNIE SW
35 MAUNIE SE
40 NEW HAVEN NE
42 EMMA NE
46 NEW HAVEN SE
47 EMMA SW
48 EMMA SE

INDEX TO ADJOINING 3.75 MAPS

EMMA NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 41 OF 48

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.



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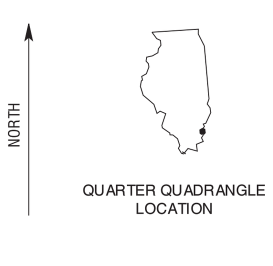

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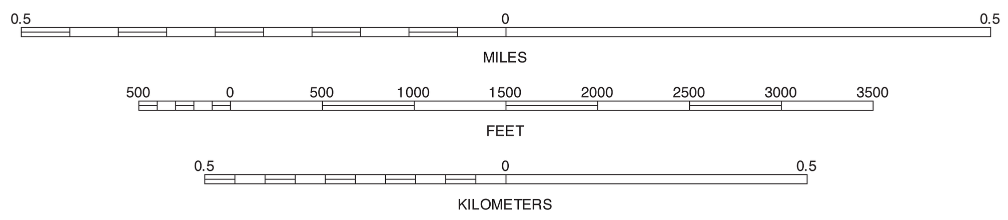

34	35	36
41		
47	48	

34 MAUNIE SW
35 MAUNIE SE
36 SOLITUDE SW
41 EMMA NW
47 EMMA SW
48 EMMA SE

INDEX TO ADJOINING 3.75 MAPS

EMMA NE, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 42 OF 48

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

WHITE COUNTY, ILLINOIS
NORRIS CITY SW QUADRANGLE
SHEET NUMBER 43 OF 48

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North American Datum of 1983 (NAD83). GRS-80 Spheroid
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NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

37 NORRIS CITY NW
38 NORRIS CITY NE
44 NORRIS CITY SE

INDEX TO ADJOINING 3.75 MAPS

NORRIS CITY SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 43 OF 48

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NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES: 0.5 0 0.5

FEET: 500 0 500 1000 1500 2000 2500 3000 3500

KILOMETERS: 0.5 0 0.5

37	38	39
43		45

37 NORRIS CITY NW
38 NORRIS CITY NE
39 NEW HAVEN NW
43 NORRIS CITY SW
45 NEW HAVEN SW

INDEX TO ADJOINING 3.75 MAPS

NORRIS CITY SE, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 44 OF 48

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

WHITE COUNTY, ILLINOIS
NEW HAVEN SW QUADRANGLE
SHEET NUMBER 45 OF 48

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES

FEET

KILOMETERS

38	39	40
44		46

38 NORRIS CITY NE
39 NEW HAVEN NW
40 NEW HAVEN NE
44 NORRIS CITY SE
46 NEW HAVEN SE

INDEX TO ADJOINING 3.75 MAPS

NEW HAVEN SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 45 OF 48

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UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

WHITE COUNTY, ILLINOIS
NEW HAVEN SE QUADRANGLE
SHEET NUMBER 46 OF 48

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES

FEET

KILOMETERS

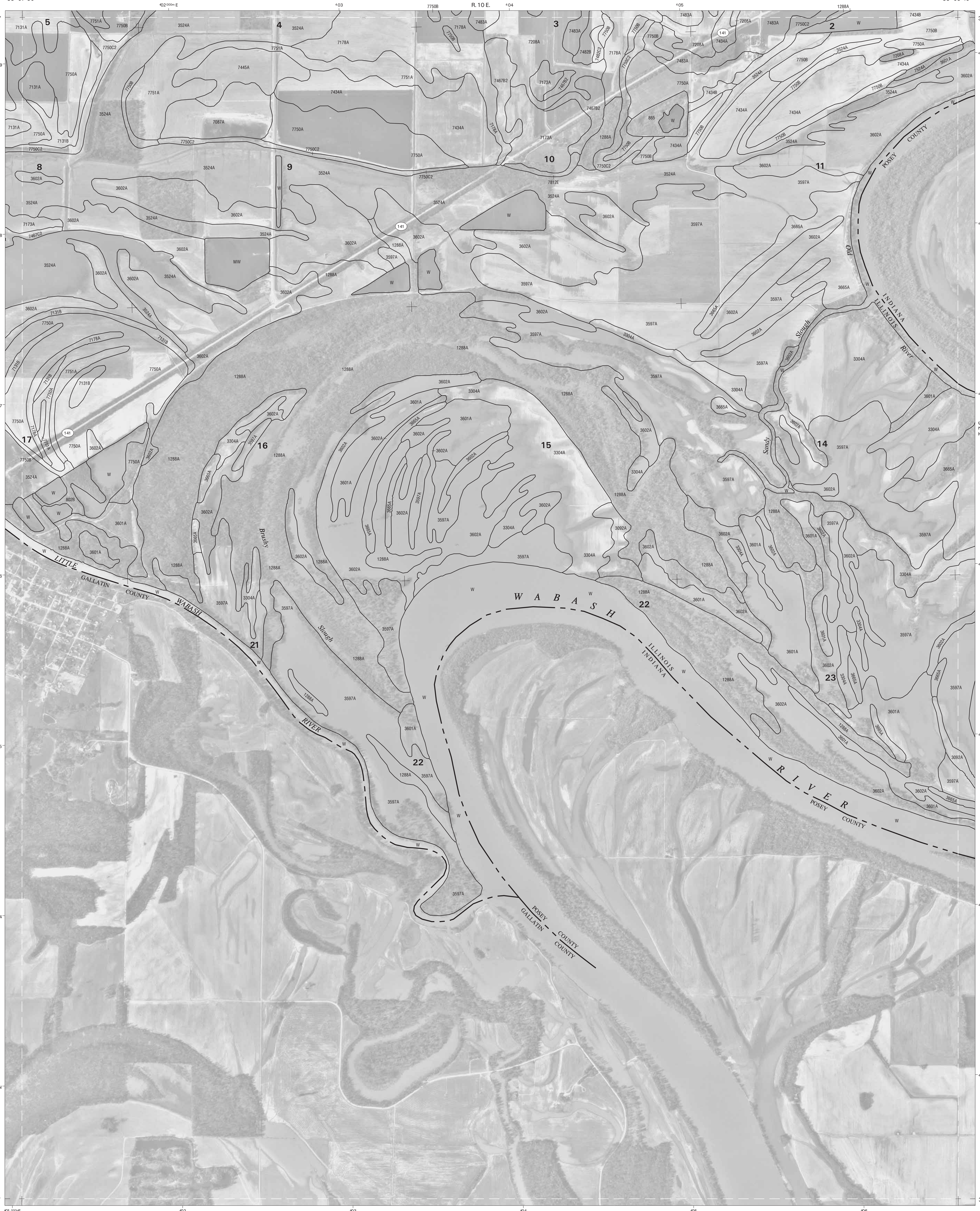
39	40	41
45		47

39 NEW HAVEN NW
40 NEW HAVEN NE
41 EMMA NW
45 NEW HAVEN SW
47 EMMA SW

INDEX TO ADJOINING 3.75 MAPS

NEW HAVEN SE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 46 OF 48

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.



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NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

40	41	42
46		48

40 NEW HAVEN NE
41 EMMA NW
42 EMMA NE
46 NEW HAVEN SE
48 EMMA SE

INDEX TO ADJOINING 3.75' MAPS

EMMA SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 47 OF 48

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NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES

FEET

KILOMETERS

41 EMMA NW
42 EMMA NE
47 EMMA SW

INDEX TO ADJOINING 3.75 MAPS

EMMA SE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 48 OF 48

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UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

WHITE COUNTY, ILLINOIS
ALBION SOUTH SW QUADRANGLE
SHEET NUMBER 5 OF 48

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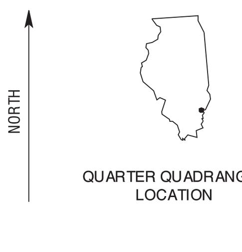
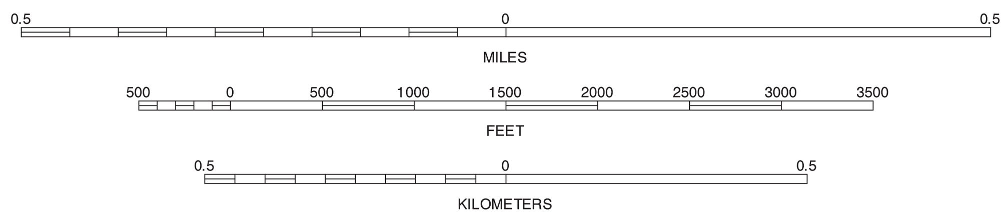
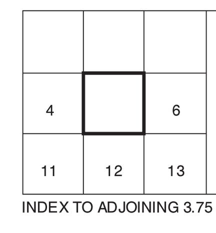


QUARTER QUADRANGLE LOCATION

SCALE 1:12000





4 GOLDEN GATE SE
6 ALBION SOUTH SE
11 CENTERVILLE NE
12 CROSSVILLE NW
13 CROSSVILLE NE

INDEX TO ADJOINING 3.75 MAPS

ALBION SOUTH SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 5 OF 48

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NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

5		7
12	13	14

5 ALBION SOUTH SW
7 GRAYVILLE SW
12 CROSSVILLE NW
13 CROSSVILLE NE
14 NEW HARMONY NW

INDEX TO ADJOINING 3.75 MAPS

ALBION SOUTH SE, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 6 OF 48

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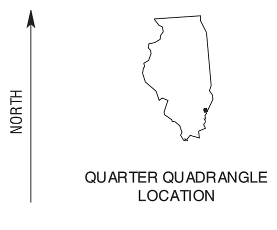

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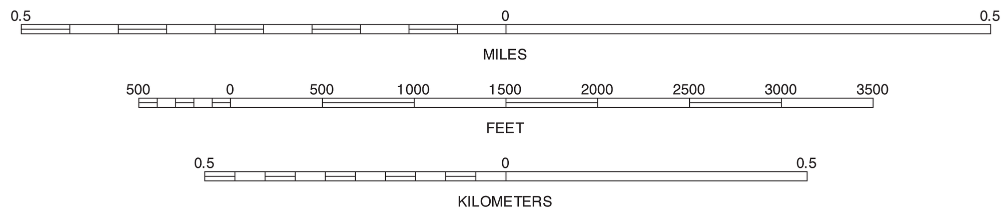

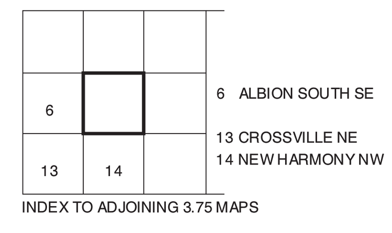

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GRAYVILLE SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 7 OF 48

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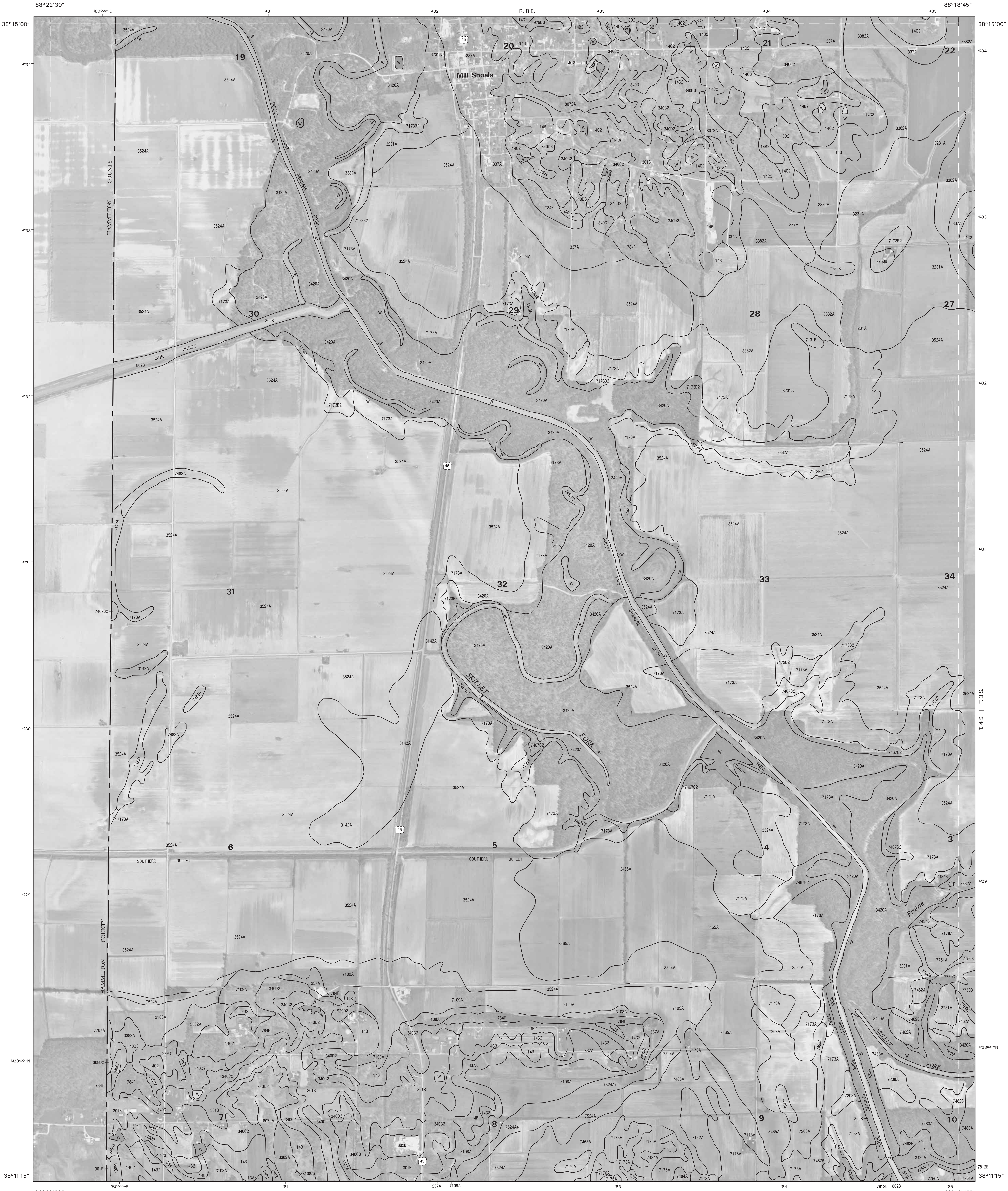
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

WHITE COUNTY, ILLINOIS
SPRINGERTON NW QUADRANGLE
SHEET NUMBER 8 OF 48



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North American Datum of 1983 (NAD83). GRS-80 Spheroid
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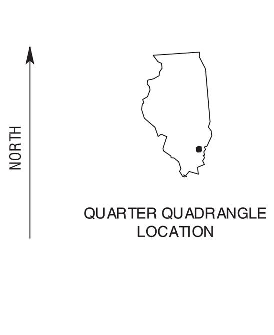

SCALE 1:12000

MILES
FEET
KILOMETERS

1	BURNT PRAIRIE SW
2	BURNT PRAIRIE SE
9	SPRINGERTON NE
15	SPRINGERTON SW
16	SPRINGERTON SE

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SPRINGERTON NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 8 OF 48

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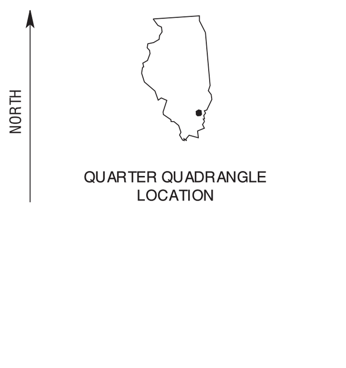

QUARTER QUADRANGLE
LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

1	2	3
8		10
15	16	17

1 BURNT PRAIRIE SW
2 BURNT PRAIRIE SE
3 GOLDEN GATE SW
8 SPRINGERTON NW
10 CENTERVILLE NW
15 SPRINGERTON SW
16 SPRINGERTON SE
17 CENTERVILLE SW

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SPRINGERTON NE, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 9 OF 48

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

Descriptions of Special Features

Name	Description	Label
Blowout	A small saucer-, cup-, or trough-shaped hollow or depression formed by wind erosion on a preexisting sand deposit. Typically 0.2 acre to 2.0 acres.	BLO
Borrow pit	An open excavation from which soil and underlying material have been removed, usually for construction purposes. Typically 0.2 acre to 2.0 acres.	BPI
Calcareous spot	An area in which the soil contains carbonates in the surface layer. The surface layer of the named soils in the surrounding map unit is noncalcareous. Typically 0.5 acre to 2.0 acres.	CSP
Clay spot	A spot where the surface layer is silty clay or clay in areas where the surface layer of the soils in the surrounding map unit is sandy loam, loam, silt loam, or coarser. Typically 0.2 acre to 2.0 acres.	CLA
Depression, closed	A shallow, saucer-shaped area that is slightly lower on the landscape than the surrounding area and that does not have a natural outlet for surface drainage. Typically 0.2 acre to 2.0 acres.	DEP
Disturbed soil spot	An area in which the soil has been removed and materials redeposited as a result of human activity. Typically 0.25 acre to 2.0 acres.	DSS
Dumps	Areas of nonsoil material that support little or no vegetation. Typically 0.5 acre to 2.0 acres.	DMP
Escarpment, bedrock	A relatively continuous and steep slope or cliff, produced by erosion or faulting, that breaks the general continuity of more gently sloping land surfaces. Exposed material is hard or soft bedrock.	ESB
Escarpment, nonbedrock	A relatively continuous and steep slope or cliff, generally produced by erosion but in some places produced by faulting, that breaks the continuity of more gently sloping land surfaces. Exposed earthy material is nonsoil or very shallow soil.	ESO
Glacial till spot	An exposure of glacial till at the surface of the earth. Typically 0.25 acre to 2.0 acres.	GLA
Gravel pit	An open excavation from which soil and underlying material have been removed and used, without crushing, as a source of sand or gravel. Typically 0.2 acre to 2.0 acres.	GPI
Gravelly spot	A spot where the surface layer has more than 35 percent, by volume, rock fragments that are mostly less than 3 inches in diameter in an area that has less than 15 percent rock fragments. Typically 0.2 acre to 2.0 acres.	GRA

Name	Description	Label
Gray spot	A spot in which the surface layer is gray in areas where the subsurface layer of the named soils in the surrounding map unit are darker. Typically 0.25 acre to 2.0 acres.	GSP
Gully	A small channel with steep sides cut by running water through which water ordinarily runs only after a rain or after melting of snow or ice. It generally is an obstacle to wheeled vehicles and is too deep to be obliterated by ordinary tillage.	GUL
Iron bog	An accumulation of iron in the form of nodules, concretions, or soft masses on the surface or near the surface of soils. Typically 0.2 acre to 2.0 acres.	BFE
Landfill	An area of accumulated waste products of human habitation, either above or below natural ground level. Typically 0.2 acre to 2.0 acres.	LDF
Levee	An embankment that confines or controls water, especially one built along the banks of a river to prevent overflow onto lowlands.	LVS
Marsh or swamp	A water-saturated, very poorly drained area that is intermittently or permanently covered by water. Sedges, cattails, and rushes are the dominant vegetation in marshes, and trees or shrubs are the dominant vegetation in swamps. Typically 0.2 acre to 2.0 acres.	MAR
Mine or quarry	An open excavation from which soil and underlying material have been removed and in which bedrock is exposed. Also denotes surface openings to underground mines. Typically 0.2 acre to 2.0 acres.	MPI
Mine subsided area	An area that is lower than the soils in the surrounding map unit because of subsurface coal mining. Typically 0.25 acre to 3.0 acres.	MSA
Miscellaneous water	A small, constructed body of water that is used for industrial, sanitary, or mining applications and that contains water most of the year. Typically 0.2 acre to 2.0 acres.	MIS
Muck spot	An area that occurs within an area of poorly drained or very poorly drained soil and that has a histic epipedon or an organic surface layer. The symbol is used only in map units consisting of mineral soil. Typically 0.2 acre to 2.0 acres.	MUC
Oil brine spot	An area of soil that has been severely damaged by the accumulation of oil brine, with or without liquid oily wastes. The area is typically barren but may have a vegetative cover of salt-tolerant plants. Typically 0.2 acre to 2.0 acres.	OBS
Perennial water	A small, natural or constructed lake, pond, or pit that contains water most of the year. Typically 0.2 acre to 2.0 acres.	WAT

Name	Description	Label
Rock outcrop	An exposure of bedrock at the surface of the earth. Not used where the named soils of the surrounding map unit are shallow over bedrock or where “Rock outcrop” is a named component of the map unit. Typically 0.2 acre to 2.0 acres.	ROC
Saline spot	An area where the surface layer has an electrical conductivity of 8 mmhos/cm-l more than the surface layer of the named soils in the surrounding map unit. The surface layer of the surrounding soils has an electrical conductivity of 2 mmhos/cm-l or less. Typically 0.2 acre to 2.0 acres.	SAL
Sandy spot	A spot where the surface layer is loamy fine sand or coarser in areas where the surface layer of the named soils in the surrounding map unit is very fine sandy loam or finer. Typically 0.2 acre to 2.0 acres.	SAN
Severely eroded spot	An area where, on the average, 75 percent or more of the original surface layer has been lost because of accelerated erosion. Not used in map units in which “severely eroded,” “very severely eroded,” or “gullied” is part of the map unit name. Typically 0.2 acre to 2.0 acres.	ERO
Short steep slope	A narrow area of soil having slopes that are at least two slope classes steeper than the slope class of the surrounding map unit.	SLP
Sinkhole	A closed depression formed either by solution of the surficial rock or by collapse of underlying caves. Typically 0.2 acre to 2.0 acres.	SNK
Slide or slip	A prominent landform scar or ridge caused by fairly recent mass movement or descent of earthy material resulting from failure of earth or rock under shear stress along one or several surfaces. Typically 0.2 acre to 2.0 acres.	SLI
Sodic spot	An area where the surface layer has a sodium adsorption ratio that is at least 10 more than that of the surface layer of the named soils in the surrounding map unit. The surface layer of the surrounding soils has a sodium adsorption ratio of 5 or less. Typically 0.2 acre to 2.0 acres.	SOD
Spoil area	A pile of earthy materials, either smoothed or uneven, resulting from human activity. Typically 0.2 acre to 2.0 acres.	SPO
Stony spot	A spot where 0.01 to 0.1 percent of the surface cover is rock fragments that are more than 10 inches in diameter in areas where the surrounding soil has no surface stones. Typically 0.2 acre to 2.0 acres.	STN
Unclassified water	A small, natural or manmade lake, pond, or pit that contains water, of an unspecified nature, most of the year. Typically 0.2 acre to 2.0 acres.	UWT

Name	Description	Label
Very stony spot	A spot where 0.1 to 3.0 percent of the surface cover is rock fragments that are more than 10 inches in diameter in areas where the surface cover of the surrounding soil is less than 0.01 percent stones. Typically 0.2 acre to 2.0 acres.	STV
Wet depression	A shallow, concave area within an area of poorly drained or very poorly drained soils in which water is ponded for intermittent periods. The concave area is saturated for appreciably longer periods of time than the surrounding soil. Typically 0.2 acre to 2.0 acres.	WDP
Wet spot	A somewhat poorly drained to very poorly drained area that is at least two drainage classes wetter than the named soils in the surrounding map unit. Typically 0.2 acres to 2.0 acres.	WET